



SURVEYING AND EXPLORING IN SIAM.



131 A 29

SURVEYING AND EXPLORING IN SIAM.

BY

JAMES MCCARTHY, F.R.G.S.,

DIRECTOR-GENERAL OF THE SIAM GOVERNMENT SURVEY.

131/12/1

(131/12/1)

LONDON

JOHN MURRAY, ALBEMARLE STREET

1900

1000 011
W I T A M W S A N S T I V E D
T O N D S A N D J C C 8

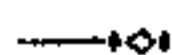


131 A 111

TO
THE MEMORY
OF
THE LATE
HENRY S. SMILES, C.E.,
GEORGE H. BUSH,
AND
NAT TAT,
MY LATE ASSISTANTS AND COMPANIONS, WHO DIED WHILE
SURVEYING IN THE INTERIOR OF SIAM, THE LAST-
NAMED HAVING BEEN ROULY MURDERED BY
ROBBERS ON THE BRUSH FRONTIER,
I DEDICATE THESE
NOTES

J. M

PREFACE.



For a period of twelve years (1881-93) I was engaged in collecting material for the compilation of a map of Siam which might form the foundation of a national survey system. Looking back over these years, and considering not only the severity of the labour, but the many annoyances and obstacles which impeded the progress of the work, I am surprised at the amount of success which was achieved. The improvements recently effected in the Government Departments of Siam are so extensive, that one who is acquainted only with existing conditions can hardly imagine the labour and worry which were involved in service under the old *regime*.

That the results of the twelve years' labour may be secure and easily accessible, they have been placed among the records of the Royal Geographical Society. The following notes claim only to record such incidents and observations as seemed most likely to interest those who have at heart the progress of geographical work throughout the world. The notes pretend to nothing but a faithful record of facts obtained by incessant and often dangerous labour.

The Siamese Survey Department, now provided with a numerous staff, have settled down to regular cadastral work. Their labours are facilitated by the large-scale surveys near the capital, and by the chain and compass preliminary surveys of the districts in the valley of the M e Nam Cha. Phra already executed, and, though less

hereto in their nature than those of the surveying process, will be of much practical benefit.

I trust that the map and notes may strengthen the interest already shown in a very interesting country and people and may be serviceable to any who may venture there. Above all, I hope they may be useful to the Siamese themselves.

JAS MCCARTHY.

LONDON

1st June, 1898.

It should be stated that the map which accompanies this volume is printed on copper, and that the expense has been liberally borne by the Siamese Government.

The pen-and-ink sketches which are marked with an asterisk have been kindly contributed by Mr H Warington Smyth, who has also revised the proofs.

SIR R G S.

LONDON,

March, 1900

CONTENTS.

C O N T E N T S :	P A G E
I. BEGINNINGS AT RAHENG AND BANGKOK	1
II IN THE WESTERN TEAK FOREST	5
III IN THE MALAY PENINSULA—SINGORA AND TANJ	8
IV. THE MALAY PENINSULA—WORK IN RAMAN	11
V START FOR THE NORTH-EAST FRONTIER TOP-KNOT CUTTING	18
VI FROM BANGKOK TO KORAT—ELEPHANTS	21
VII KORAT CITY AND RUINS	26
VIII THE KORAT PLAIN TO NAWNG KAI	30
IX NAWNG KAI AND WING CHAN	33
X. AMONG THE MLO	40
XI IN THE TRACK OF THE HAW	44
XII THE CHIENG KWANG HIGHLANDS	50
XIII. ON THE ME KAWNG RIVER	55
XIV LUANG PRABANG CITY	59
XV TRADITIONS OF LUANG PRABANG	66
XVI. SICKNESS IN THE RAINS—WITHDRAWAL TO BANGKOK—THE ULATADIT ROUTE	72
XVII MARCH THROUGH MUANG NAN	78
XVIII. OPERATIONS AGAINST THE HAW	81
XIX MARCH TO TENG—THE KA CHU	92
XX POLITICS AND PERSONS IN TENG	99
XXI THE LAST HAW EXPEDITION AND SACK OF LUANG PRABANG	105
XXII RAILWAY SURVEYS IN THE LOWER LAO STATES	111
XXIII FRONTIER DEMILITARIZATION, 1890	117
XXIV CHIENG MAI TO MUANG TANG	123

CONTENTS

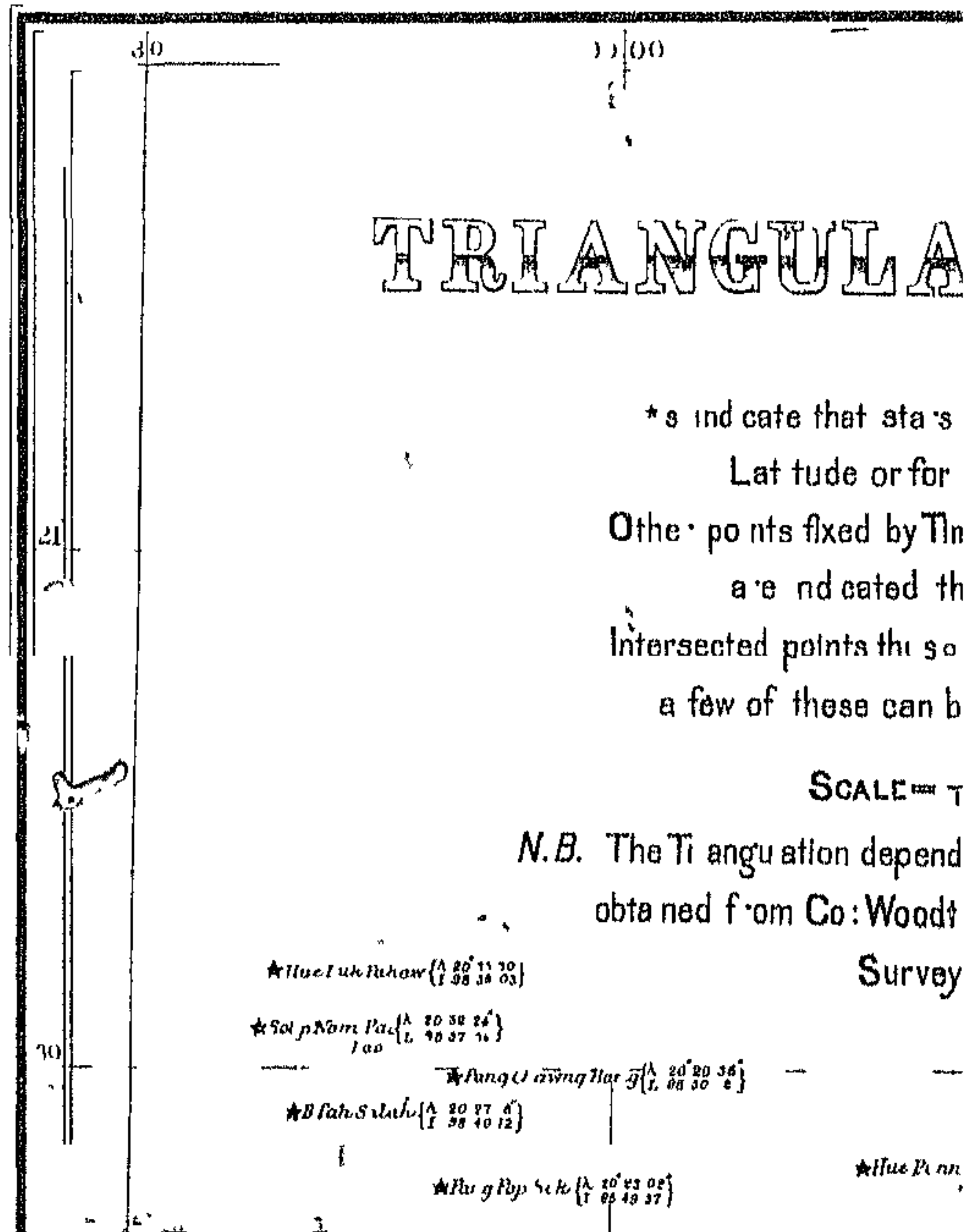
CHART I		13
XXV	THE MEASURE COMPARISON OF THE TRIANGULATION	120
XXVI	WORK IN CHINA SINCE	131
XXVII	WORK IN THE DELTA OF	140
XXVIII	PROGRESS AT CHENG MAI—THE MIO AND YA CHUAN KONG	14
XXIX	AMONG THE TAMU MUANG SINCE	154
XXX	LAND IN SOUTHERN—THE SIBSAWN AND PANA SIAI	159
XXXI	WORK UNDER MUANG SAI	165
XXXII	MUANG PHABAN REVISION	171
XXXIII	THE HIGH AND PLACES OF THE CHINA	177
XXXIV	CONCLUSION OF THE NORTH IN TRIANGULATION	187
	APPENDIX	185
	INDEX	197

MAPS.

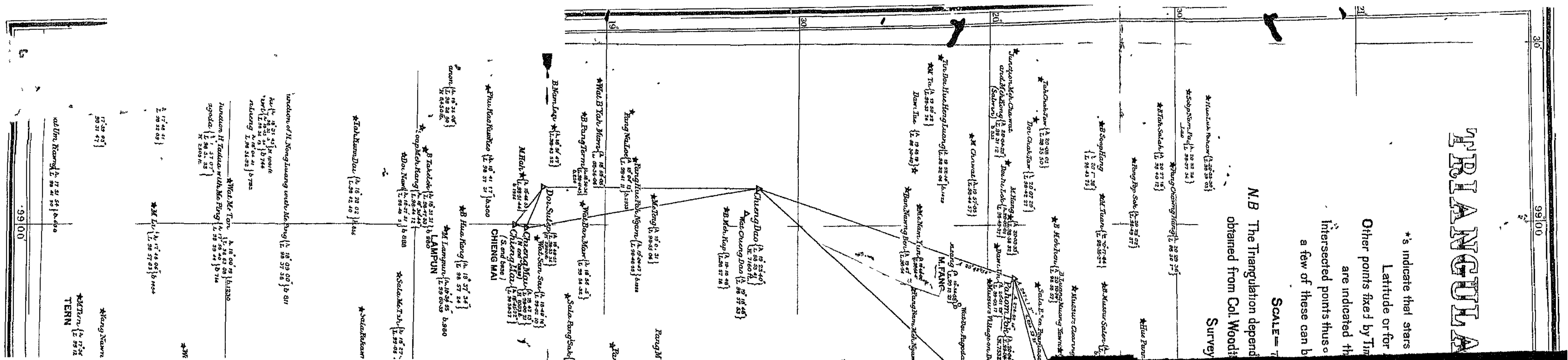
TRIANGULATION CHART	1
MAP OF THE KINGDOM OF SIAM AND THE ADJACENT COUNTRIES	<i>In pocket at end</i>

LIST OF ILLUSTRATIONS.

	PAGE
*ON THE ME NAM	1
TEMPLE IN CHIENG MAI	6
BUDDHA	7
*A MALAY PENINSULA ANCHORAGE	10
PA SURISAK ELEPHANT-HOWDAH (BACK VIEW)	11
*THE PALACE BANGKOK	20
PAVILION AT PANG-LAI-IN	23
WAT NOMWAN, KORAT	27
WAT PA NOM, KORAT	28
*TRANSITION FACILITIES A GOOD "ROAD"	29
FORTIFIED PAGODA NEAR WING CHAN, RUINED BY THE HAN	31
OLD INSCRIPTION AT WING CHAN	35
WAT (TEMPLE) FORTIFIED BY THE HAN	36
LAO OF HUA PAN HA LANG HOK	37
*THE EVENING BATH	39
CHAO KANH, GOVERNOR OF MUANG PUAN	45
*A PAGODA	49
PLAIN OF CHIENG KWANG	50
IN MUANG PUAN	52
BUDDHA	51
*A ME KAWNG RAID (LOW WATER SEASON)	58
MARKET-PLACE, LUANG PRABANG, 1885	60
CHIEF OF LUANG PRABANG	61
LUANG PRABANG MARKET-PLACE BEFORE DESTROYED BY HAN	63
' THE ME KAWNG AT LUANG PRABANG	64
*LUANG PRABANG	65
KA, OR KAKUK MAN NOUHE N SIAM	67
MARKET-PLACE, LUANG PRABANG	68
KA CHA	69
THE ME KAWNG AT LUANG PRABANG	70
BUDDHA	71



29/A





SURVEYING AND EXPLORING IN SIAM.

CHAPTER I

BEGINNINGS AT RAHENG AND BANGKOK

IN the year 1881 I began to prepare the way for a general map of Siam, and after various discouraging experiences, involving two months' delay, I set out alone, with two Siamese commissioners to examine the route in Siamese territory for the erection of a telegraph line between Bangkok and Maulmein by way of Raheng or Tak.

The Eastern Frontier Survey of India had determined the positions of some peaks west of Raheng, and near the frontier, and it had been found desirable to fix the position of Raheng by a small series of triangles connecting the peaks. This I succeeded in doing after an unnecessary amount of labour, during which I learnt what it was to be associated with old-fashioned Siamese officials, who deliberately went out of their way to create obstruction.

It is unnecessary to enter into details to show how the work was done. On one occasion, when, after a wearisome tramp over the hills, I returned to quarters for the night, no trace of the tents could be found. There was still, however, sufficient light to ascertain by the tracks the direction the elephants had taken. Those who accompanied me were ignorant of the pathways, nor could I speak their language, so there was nothing for it but to keep on the stream, floundering along in the dark over slippery rocks sometimes up to my neck in bitterly cold water; and very glad I was when at last I reached the camp after midnight. On another occasion two men at the referring lamp, when I was taking some observations for azimuth, ran off with the lamps. Here my faithful Indian servants were brought into requisition, and with lamps on their heads retraced the

line to the referring lamp-board, which fortunately, was found in its place

The position of Raheng having been determined I did nothing more to do than run a rigorous traverse to Kampeng, a distance of 40 miles, but I met with so much obstruction and local opposition that the cutting of the lines for which I had no assistance was abandoned, and from Kampeng to Nakawn Sawan a distance of 90 miles, a traverse with chain and compass was run. The run had now set in, and the country was flooded in every direction. I had never been ill before, but the constant worry now overpowered me, and left me in a state of complete nervous prostration, which compelled me to return to Bangkok.

The country between Raheng and Maulmein was for the most part hilly, the main watershed being distant in a straight line only about 15 miles. The two towns were in direct communication, the chief path crossing the watershed at an elevation of over 2000 feet, while there were other paths used in the dry and hot weather, as affording better fodder for the cattle employed in transport work.

A considerable trade is carried on with Maulmein, and the ubiquitous Shans pass daily in great numbers, carrying Manchester and Birmingham goods to the most remote parts of Siam.

From Raheng to Nakawn Sawan the country is flat, and carts can be used. The great highway, however, is the river, which, at Raheng, is over 2000 feet across, in the dry season its bed is nearly dry and the wide sandbanks are covered with hundreds of teak logs, waiting for the next rise of the water.

Nearly the whole population lives on the river-banks, the villages inland being small, with few inhabitants. The telegraph line has long since been constructed, but the portion between Raheng and the frontier is seldom in repair, and the alternative route from Bangkok to Tavoy by Kumbun is chiefly used.

When I returned to Bangkok an exhibition of all Siam's produce was in full swing in celebration of the hundredth year of the present dynasty, and in commemoration of the foundation of Bangkok. The exhibition was a very great success, and was thronged by crowds of good humoured people.

The prospects of ever being able to work sufficient material for a general map of Siam were gloomy enough.

There was strong local opposition to any work of the kind, and

even under favourable conditions, very little could be done by single individual in so large a country as Siam. The king gave every encouragement, while Prince Damrong, the present Minister of the Interior, took an active interest in the work, and about thirty Siamese young men were selected for survey training. About twenty of these, however, were found to be utterly useless and had to be got rid of.

At this period the triennial tax payable by the Chinese had to be collected, and it was proposed to make a large scale survey of Sumpeng, the most thickly populated part of Bangkok, its inhabitants being chiefly Chinamen. The place afforded an excellent training-ground for the young Siamese. The accumulated filth of years had silted up the canals, and the narrow streets were reeking with those intolerable stenchs in which the Chinese seem to thrive, while the opium and drinking dens, and other haunts of vice, furnished by the Chinese were distinguishable by their surrounding filth-heaps.

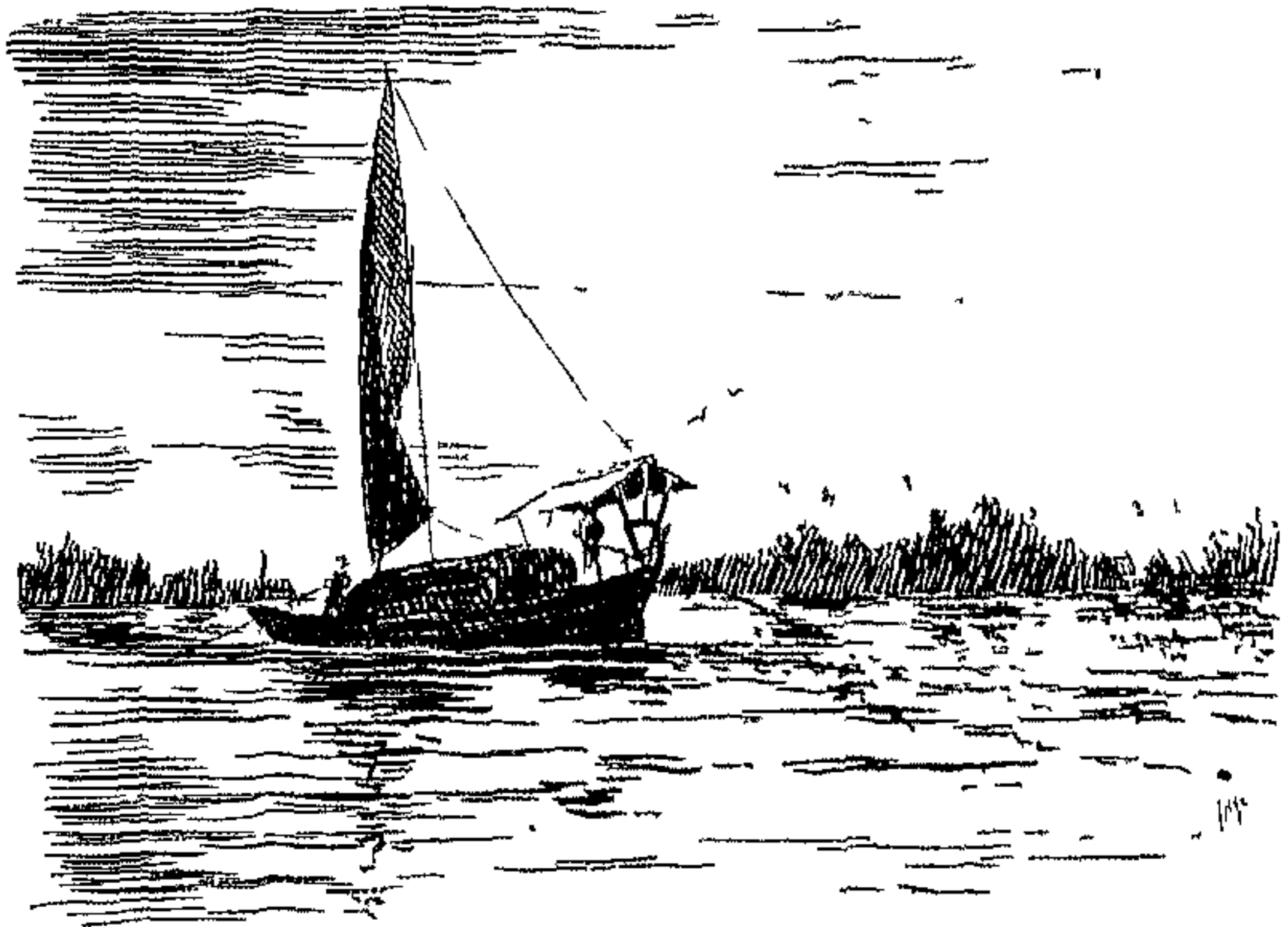
Gangs of about twenty Chinamen tied by a narrow cord wrist to wrist, under the charge of a Siamese official in no particular costume, but armed with a big stick, would pass down the street on the way to the lock up, where they would be detained until their friends came forward and paid the tax they had tried to evade. As all the Chinese belong to one or other of the numerous secret societies, this is not done before the taxes are paid, and the men liberated. The Chinese are the most lightly taxed in the kingdom, being subject only to a poll tax of four ticals in three years. Judging from Singapore, which has a population of 150,000, it is not too much to assume that there are 300,000 people in Bangkok, and of this number the Chinese form nearly half.

Secret societies, carefully suppressed by the Chinese Government, and by the Governments of Hong Kong and the Straits Settlements, are a standing menace in Bangkok. In 1889 they started riots which were not suppressed until the military appeared on the scene.

Some of these societies had been encouraged as a set-off against the native Christians, for it was always considered that the French priests were enrolling members of a similar association. When a Buddhist high priest, who had been a chaplain to the late King, became a Christian, the one Chinese society then existing was fostered till it waxed too strong. Then another was started in

opposition, and now there are six of these lawless bandits threatening the peace and security of the whole community.

The Chinaman is a born trader and the easiest person to deal with him. The consequence is that the narrow streets of Sampeng, seen by few Europeans, are thronged with busy crowds and the little shop front awnings, meeting in the middle of the street make the heat more stimulating to the half-naked happy-go-lucky passers-by. Some are on their way to the pawnshop to dispose of some property—perhaps your own hat snatched from you last evening before, others, to the Chinese temples to consult the oracles as to the lucky number in the next lottery, in which they have staked their all. After midnight the successful numbers are shouted through the streets by Chinese criers, who rival the parish dogs in making night hideous. Sometimes the crowd hurriedly makes way for a Chinaman, who rushes down the street brandishing a sword accompanied by others clashing cymbals and beating drums. They too rush into the temple and when I refer to my intelligent Chinese servant for an explanation he puts me off with "Chin chin, let makee do." Later we learn that the lot had fallen to this sword-brandishing Chinaman to take part in some ghastly performance in a Chinese procession, such as sitting on a sword with his back gashed open, or carrying a sword thrust through his cheeks.



CHAPTER II.

IN THE WESTERN TEAK FORESTS.

WHILE the large-scale survey of Siam was being prosecuted I had to go north to map the country in the valley of the Me Tun, a tributary of the Me Ping and collect information about a disputed boundary line between the districts of Chieng Mai and Raheng. The dispute had arisen over the royalties to be paid for felling teak trees and the authorities of Chieng Mai complained that Raheng was again encroaching on their territory. A stream was admitted to be the boundary, but the Raheng officials meant one stream, the Chieng Mai officials another 10 miles further south.

The Me Tun, rising amidst well wooded hills with great quantities of teak, flows in a southerly direction, and, after receiving the Me Same, doubles on its course, and, following a northerly direction, falls into the Me Ping.

There is but little cultivation and few inhabitants, and such as there are belong to one of the many simple hill tribes of Kuenen who labour chiefly in the teak forests. Amidst the ruins of Muang Tun, however, there are found evidences that the valley had at one time been occupied by a more settled people. At the time of my visit the teak forests were under the control of a Burman and there were lying in the Me Same about a thousand logs which could be worked into the Me Ping during the following rainy season. The Burman, as trading Burmans usually are, was hopelessly in debt, and tenders having been invited for the purchase of the rights of the Burman to the forest, these rights passed into the hands of the Borneo Company.

The teak trees are 'girdled'—that is, notches are cut a few inches deep round the trunk to kill them. After three years they are considered well seasoned, and are felled. Then the difficulties of having them transported to Bangkok begin.

The Karens follow the usual customs of the hill tribes, and tell

the timber, clearing the hill-sides for the cultivation of rice (a different grain from that sown on the inundated plain), tobacco, cotton, Indian corn, and vegetables. After two or three years the soil is considered exhausted—then the village is bodily removed, and



HOUSE IN CHIANG MAI

clearings started in another direction, care being taken to avoid encroaching on the grounds of neighbouring tribes. In this way the tribe return in a few years to their old clearings. The Karens are hardy foresters, and the whole of the teak in the Me 'Tun is worked by them.

At the time of my visit to the Me 'Tun valley the head Karen was wanted in Laheng, and instead of due dealings with the man, a long series of manoeuvres, in which I was unwittingly involved was employed to secure his appearance. The whole scheme was worked by a man who had the administration of the borderland, but was reported by the Governor of Raheng as a murderer and was known to the British authorities across the border as the head of a gang of dacoits.

I had only a Chinese servant with me, and we had a very rough time of it. The elephants and drivers ran away, so that I was without transport, and some hillians would prowl about at night amusing themselves by firing shots. Fortunately, I was ill of fever or might have been forced into violent action. At last an elephant was procured, but the pads having been covered with filth, the stench was unendurable. Determined to push on, I started wading, though suffering from a raging fever, in a broiling sun. The constant wading in the water had reduced my shoes to a pulp, and it was a relief to throw them off and walk barefooted. The path was very rocky, and it was not until after dark that I came to a halt and lay on the bank of the stream, completely exhausted, with my feet frightfully lacerated.

The others followed in my track but it was near midnight when they reached the spot where I was lying, a helpless heap of pains and aches. I was carried into Raheng where, fortunately, falling into the hands of Mr. Stevenson, a timber-trader, I met with kind care and attention. Fever had now established itself in my system, and became my annual companion.



U D I A

CHAPTER II

IN THE MALAY PENINSULA SINGORA AND AN

I HAD barely recovered from my fever when I started on an expedition to the Malay peninsula. A dispute had arisen about the correct boundary-line between the British Protected State of Perak and Patani, but it was difficult to locate the disputed territory. The Government of the Straits Settlements having put forward the claim, it was found that they were referring to the same territorial division as had existed some forty or fifty years previously, and I was unaware that the State of Patani had been subdivided by the Siamese Government into seven minor states which are mentioned below. It was now found that the disputed territory was in the State of Sarawak.

The preliminaries being settled Mr George Bush accompanied me, and we went on board the *Narrow Beam* where we met the Siamese commissioner, Pua Pichai Sawang Kum. The captain of the steamer was a Cambodian Malay who had been refused leave to go on a pilgrimage to Mecca.

He was not in the best of temper and declared that he was totally ignorant of the west coast of the Gulf of Siam. To make up for the want of local knowledge, he had an old nautical chart of the coast of Nova Scotia.

We found no access could be had to the cabins of the steamer, as the keys were said to be in the palace, so we did the best we could on deck, not too well protected from wind and rain. The Malay captain having explained to the Siamese commissioner that he knew nothing of the route along the west coast of the Gulf, it was arranged to strike west from the lighthouse, and, anchoring at night, to steam closely along the coast during the day.

A bold coast line is always grand, but feelings of admiration for the coast-line of the Gulf of Siam are somewhat modified by a

knowledge of the loneliness of the finest clad mountains and the ever that lurks there. The Sam Roi Yawt, or "three hundred pillars" of limestone, form a beautiful picture, but do not possess a human inhabitant, and the voyager is always reminded that it was on this coast that the late King of Siam contacted a fatal fever when he accompanied a party of European astronomers who he had invited to make observations of a total eclipse of the sun in 1877.

We cast anchor off Champawr where, it may be said, the Malay peninsula begins. The little harbour was filled with rocks covered with oysters. The usual coconut-palms and grass shanties marked the position of the village.

A few months before my arrival some French engineers had visited the place with a view to making it one of the entrances to a ship canal designed to pierce the peninsula the highest point of the intended route being 250 feet above sea level.

On June 15 we anchored off Sungkla, or Singora, and remained there a few days, waiting for the acting governor, who had been appointed a boundary commissioner. We landed in the midst of holiday-making in connection with the coronation of the late P'in Santara and there was a great display of hunting in every direction. Sports were also the order of the day, and included boxing competitions in the native style. Kicking was permitted and freely indulged in, and it was surprising to see with what force and dexterity a man would land a foot on his antagonist's jaw. There were also some buffalo fights. The horns of the combatants were highly polished, and the animals were goaded on by their keepers, to the intense delight of the crowd, who yelled frantically whenever one was goaded to earth.

Covering one side of the reception hall of the governor's house was a beautiful work of art in brass relief, representing 'The taking of Singora'. The grandfather of the present governor came from Amoy about the time of the founding of Bangkok and, attacking Singora, captured it from the Malays. The Malay coast offered an easy prey to the venturesome Chinese in their junks, and both the east and west coasts of the northern part of the peninsula were brought under their influence.

The Siamese provinces of the Malay peninsula with Malay governors are Kedah or Sai, Kelantan, Tringau, and the following subdivisions of Patani: Tuni, Nawngchik, Yida, Yaring Sai, Langa

o Lege and Raman. The subdivisions of Patani send the tribute—trees, gold and silver—through the Governor of Singora to Bangkok, the other states send theirs direct.

We steamed from Singora to Patani, anchoring a long distance from the shore, and proceeded in shallow canoes up the Patani river to the Chinese town, which consists of a number of houses packed within high brick walls, enclosing an area of about 100 feet long and 200 feet broad.

The rajah's house was about a mile and a half further up the river. The rajah, a youth of about twenty years of age, was in Kelantan for his marriage to the daughter of the chief of that province.

There was a large area that had been under rice cultivation, over which cattle of an excellent breed were grazing, there were also some sheep, which surprised me as I had always accepted it as true that sheep did not thrive where bamboos grew. The trade was entirely in the hands of the industrious Chinese, and consisted principally of lead, tin, gutta percha, ivory, and hides. Opium was smoked to excess by everybody high and low.

To carry on survey work, accompanied by old-fashioned Siamese commissioners, was an arduous task. Those associated with me were suspicious, and were always exercising their own cleverness and my patience by obstructing the progress of work, which had to be adapted to circumstances. As the line of country over which we were to proceed was nearly north and south, I adopted the plan of observing for latitude, determining the azimuth of the next forward line to conspicuous peaks and surveying the routes between



A MALAY PINASULA ANCHORAGE

CHAPTER IV

THE MALAY PENINSULA - WORK IN BAMAN

The jungle was very heavy and on the banks of the river appeared impenetrable with the bright green, palm like leaves of the creeping cane binding the trees together. Bush and I took a small boat, and were poled rapidly against the swift current of the Patani river. At nightfall we pulled up usually at some sandbank affording conveniences for running up a kitchen range, which consisted of three sticks driven into the sand, so as to support a pot, the fuel, always abundant within hand-reach, being lighted between the sticks. Our little tents were pitched in a few minutes, and some smooth stones from the river put over the tent pegs prevented them from being dragged out of their positions. In the morning we breakfasted, struck tents, and were on the move again before daylight.

We reached Ta Sap, the revenue collecting station for the River of Yala. There some excellent houses had been built, and Bush and I took up our quarters in one of them. It was well we did so for in spite of every precaution taken in sending men on ahead to arrange for transport, nothing was ready, and we had to make up our minds to delay.

Near Ta Sap there are some interesting caves in a small limestone hill, very steep, and surrounded by a deep lake of muddy water containing several varieties of lotus. At the foot of the hill, and approached by a long bridge of floating bamboo, are the houses of the priests. In the Malay peninsula the common mode of conveyance is by means of a double pannier slung on the back of the elephant, a few raw hides being placed under the saddle. Having engaged an elephant that I might cross the deep mud by pool to the caves, I got on one side of the pannier, and my Chinese boy, "A Luk, on the other, to act as a counterpoise. Some one was shooting small birds hard by, and at the report the elephant bolted, rushing

over what was, fortunately, open country. When we had come to a standstill I asked A Tuk who fired the gun. He pointed out a countryman of his own, adding 'That damned Chinaman makes fire.' Having crossed the lake, we left the elephants, and ascended to a cave, which was 180 feet long and 50 or 60 feet high, with fantastic canopies of stalactite, such as are usually found in limestone caves. There was a reclining figure of Gautama about 10 feet long, partly hewn out of the rock, and partly built, there were also nineteen sitting figures of Gautama, but all were of modern construction. Adjoining was a dark cave full of bats, from the dung of which saltpetre was collected. From the mouth of the cave we obtained a magnificent view of a region where villages were hidden among fruit trees and cocoa nut and areca palms, surrounded by wide tracts of paddy fields, the whole being backed by a range of mountains.

On July 4 we moved over to Kotabaru, a four hours walk, to the residence of the Rajah of Raman, who had the reputation of being a good sportsman. Above Kotabaru was an imposing hill, or mountain, called Blinyaw, about 4000 feet high, and covered with forest to the top. I arranged to ascend and clear it, and the Rajah gave me a couple of favourite huntsmen as my companions. I had, besides, twenty good Malays each provided with an axe. The moment the ascent was begun, the forest and jungle were so heavy that nothing beyond could be seen, and the frequent ascents and descents over the spurs were such as would surely have puzzled the novice at climbing. Many a knoll was declared the top of the mountain, but nightfall found us still on the side.

We cleared the jungle near a crystal stream, put up our tents, and settled for the night. The vegetation was in great variety and included many kinds of ferns, from the delicate maidenhair to the gorgeous tree fern. The birds were numerous, and more than once we disturbed the lovely *Agouti* pheasant. In chorus with the cries of the gibbon was the monotonous call of a horn bill, which the Malays liken to the sound of chopping wood, and Legend says the bird has the spirit of a lazy and disobedient wife, doomed to be eternally mourning her disobedience. At sunset the noises of the insect world were thrilling, and one wondered how the little creatures made the din. The next day we reached the top of the hill, and it took two days' clearing before we had a good view. The labour was well rewarded. Before us lay the long tract of sea coast from Singora

to Kelantan, with a few isolated hills which varied the monotony of the low lying fertile coast lands. The plains were seen narrowing into river valleys which stretched far inland, until cultivation was lost in thick impenetrable forests extending to the mass of mountains which form the backbone of the Malay peninsula.

The published maps of this region showed all its chief rivers flowing into the Straits of Malacca on the one side, and into the Gulf of Siam on the other, as connected together in some wonderful lacustrine formation. The region, however, contains the highest mountain in the Malay peninsula.

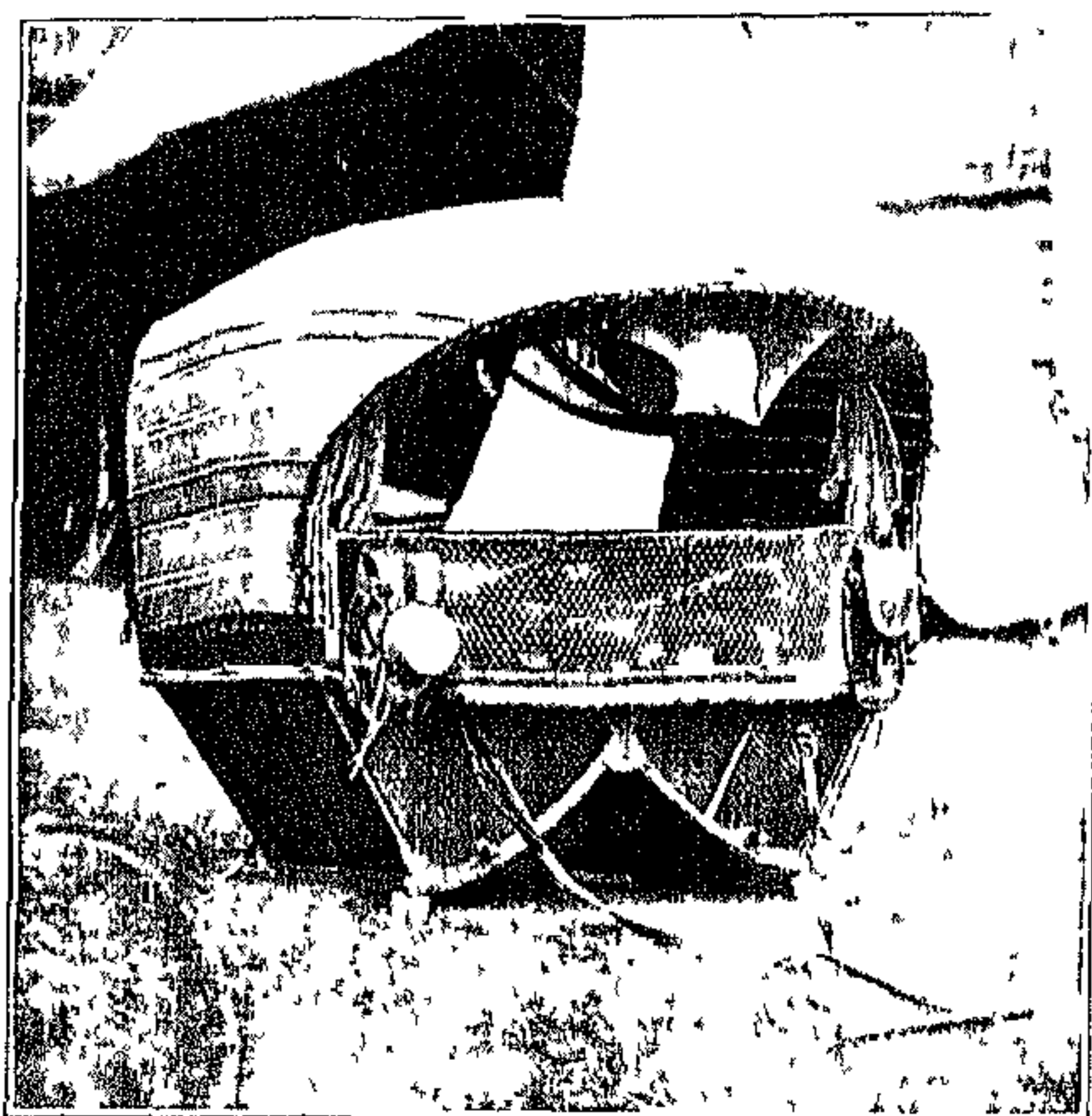
After completing the work on the hill, including observations for latitude and azimuth, instead of returning to Kotabaru, a course which would have involved delays, we proceeded over the mountain, and struck the path leading from Kotabaru to Yuom.

We there found a regularly made road about 9 miles long a monument of the industry of an English company that had been working rich tin mines, now in the hands of industrious Chinese.

Going down a steep path, one of the transport elephants made a furious rush on another and overturned it, so that it was a miracle my "boy," A Fuk, was not killed. He was smoking opium as usual, and the shock sobered him.

On the 31st August, at Yuom, I had the pleasure of meeting Mr. Bozzolow of the Perak service. He had come to prepare quarters for the reception of Sir Hugh Low, the Resident of Perak, who was accompanying the regent. In a few days Yuom became a centre of great activity. The Rajah of Ramu, leaving his own elephant, headed a procession of fifty-five others, and then I vividly remembered the day when I had been so fortunate as to get some more. We ascended a high hill in the vicinity called Angus. It was very cloudy, and I had to stay up the whole night before I could make any suitable observation. Star after star was tried for ex-meridian observations, but at the critical time each was obscured by clouds. The morning was beautifully clear and for the first time I had a view of the grand mountain at the head of the Palang and Perak rivers. The height of this mountain I made out to be over 8000 feet above sea level. Its forests are the last refuge and home of that interesting wild tribe of Negritos called Sakais. The Perak river is said to divide the Sakais from the Samung. All are called by the Malays Orang Utang ("wild men").

The Sakai is very similar to the Annamese except that he is taller; he has very black, smooth skin and wool on the head. The Samung has straight coarse hair, and a very black, rough skin. Each has the same restless expression in his eyes. They are thoroughly wild and do not cultivate the soil or build houses, but wander through the forests in search of fruit and game, leave little or no trace where they sleep and are not encumbered with covering of any form. A few sometimes venture to the Malay villages, and



1. A SAKAI LILIANI HOWDAH (EAC 61 W)

exchange canes and rubber for rice, and they have been known to work for dollars. In Perak some have been induced to settle in villages.

On August 22 Sir Hugh Low arrived at Yatom. He was riding on an ordinary elephant saddle with his clerk on the opposite side to balance him. In Perak they seem not to have cultivated the comforts of elephant travelling, for there the panniers are slung across the elephants' backs without any covering whatever. This simplicity allows to the rider an unimpeded view, but in the Malay peninsula it is not from the back of an elephant that any view is to be

expected such as might compensate for exposure to wet and to the thorns of the jungle.

The Malays learnt the art of elephant taming from the Siamese. In the neighbouring state of Selangor the elephant was not tamed, nor in any state not under the direct influence of the Siamese.

Sir Hugh Low had conferences with the Siamese commissioner, and, I understood, claimed that the main watershed was the proper boundary of Perak. On the 25th the conferences came to a close, and on the 26th Lieutenant George Caulfield of the Perak service and Bush accompanied me to explore as far as possible the region between the main watershed and the present boundary.

About sunset a sound as if of heavy cannonading was heard, and continued all night and the next day. A Malay explained it as being a battle of devils in the atmosphere. It was actually from the explosions of the eruption of Krakatoa in Java.

Crossing the main watershed, we descended into the valley of the Perak river. The paths were over very rough country and through heavy jungle, only one small village being met with until we reached Balom, near the head of the river. Balom is a collection of the usual Malay grass huts, and is on the road between Lenge Kelantan and Perak.

Surveying is often very trying work, as for success it depends on the state of the weather, and, in a rainy country such as this, requires constant change of locality. To keep the party on the move when away from the beaten track is tiresome and difficult. Caulfield accompanied me up a mountain near Balom, and it was lucky he did so, as my Malays remained behind, causing much trouble to Bush, who brought some of them up at eleven o'clock at night. Caulfield thought it better to separate the next day, as, he being a Perak official, it was evident the Malays were making his presence a pretext for obstruction, and I was sorry to lose his genial companionship. Completing the work on the hill, I descended to Balom, and immediately set out to explore the upper waters of the Perak river.

The first march took us through a gold-mine, where there were some clever Chinamen who had had experience in Australian mining. On a perpendicular bank of red clay about 30 feet high showing nodules of slate, quartz, sandstone and granite, there played a jet of water, and the material thus washed into a ditch below was

worked by men by means of their feet and hands. The water and fine silt were drained off to the river, and the residue examined for gold.

The main branch of the Perak river is a succession of deep pools; but as the jungle was dense, and we had no men to help in clearing a path, we followed the river bed, sometimes swimming, while even our baggage elephant fared badly. We saw traces of ancient gold mines—gigantic workings, abandoned, no man knows how long ago. There was a path connecting the Balom gold mine with that at Tomo in the valley of the 'Ielo'en, which is also worked by Chinamen. These miners were resisting the levy of the taxes imposed by the Rajah of Ranga (or Lege). The Malay chiefs have no means of enforcing their authority except by cutting off supplies, and as the Chinamen at Tomo received supplies from their countrymen at Balom, they were able to defy the rajah.

It was getting very late in the season, and our progress was too slow, so we constructed light bamboo rafts and floated down to Balom, which we reached at 10 p.m. The next day, September 25, we set out from Balom, but the whole forenoon was wasted, and the elephants did not start till the afternoon. The day was wet and miserable, and the camp was not reached till after dark. Towards morning one of the Malays was carried off by a tiger. Hearing his cries for help, I ran out to inquire what was the matter, and finding everything quiet, I concluded that some tomfoolery had been going on. Then, in the darkness, the men began calling out one another's names, and it was ascertained that a man was missing. He had been dragged out from among six others who had been sleeping under the semi-cylindrical bark covers of the elephant-saddles. Mahomedans have a horror of not being buried, and as the man had proved himself an excellent fellow, I determined to recover his corpse at least. At the break of dawn we followed the tiger, guided by the marks of blood on the bushes; and when we came to some old brushwood we knew from the strong smell that we had tracked the brute down. Two of the Malays who were with me could be thoroughly relied upon, so we crouched and forced our way through the brushwood. The tiger, slinking off, dragged the corpse of his victim for about 30 yards down the slope of a hill, and abandoned it in a dry ravine. We carried it back to the camp, and it was buried by the hands of friends. The companion who had been

sleeping near the man having turned grey in a night and lost his voice, was sent back on an elephant to his home.

We constructed rafts, and floated down the Perak river for five days without meeting any inhabitants.

At Kwala Tamangaw the river was choked with great rocks, so that our frail rafts could proceed no further. I therefore abandoned them, and went overland to Krone, the headquarters of a petty rajah.

All rivers among mountains are beautiful, and luxuriant growth on river banks makes a pretty picture; but there is not much poetry left in a man after he has been many days hacking his way through heavy jungle.

From Krone I went to Ilan, where there were a hundred Chinese. In this place, which is a regular death trap, the graveyard seemed the cleanest spot, and I pitched my tent near the tombs. The workmen come, or, rather, are kidnapped, from Amoy, and I very much doubt if they ever leave the mines. Most of them were covered with large ulcers, attributable to the lead in the water. The Chinese seemed rather opposed to the idea of paying taxes, on the ground that there was no protection from robbers, nor any proper road for communications. We pushed on to Kro, a plateau about 1000 feet above the main sea level. The river is very sluggish, and when joined by another, the Sungai Rue, cuts its way underground.

I had now completed the work, and got a clear idea of the claims of the Perak Government. The region claimed by Perak extended to the main watershed; that claimed and actually administered by Raman extended to Jugun Punjang (the Long Rajid) on the Perak river, the boundary line following the well defined mountain spurs east to the main watershed, and west to Gannang Inas. Thus Perak was claiming about 2000 square miles.

Never having again taken hold of me, I went down the Baling river in a small boat in Bush's company, and was placed in the hands of Dr. Hampshire of Pinang, under whose care I was able in a short time to proceed *via* Singapore to Bangkok, which place was reached on November 1.

CHAPTER V

START FOR THE NORTH EAST FRONTIER—LOI-KNOI CUTTING

I NOW began preparations for leaving Siam, since, however enthusiastic I may have been, there was little prospect of my ever being able to accomplish anything of importance. My chief difficulty had arisen not from the climate or from the rough life which every one engaged in work of this kind experiences, but from the opposition of the officials placed practically in charge of the expeditions. These people looked upon me as a superior sort of attendant, placed in the suite to swell their own importance, and, as my idea of my duties and theirs of their importance did not run in the same channel the consequence was a great deal of friction, in which, of course, being a single individual I was the sufferer, and was usually worried into a bad fever.

The fascination of the king was, however, too great, and I soon found myself preparing for another effort in his service.

Contradictory reports frequently reached Bangkok concerning ravages by Hlaw on the north east frontier of Siam, and as villages were now reported to be plundered and destroyed, the whereabouts of which puzzled the heads of those who ought to have known, the king was graciously pleased to appoint me to the command of an expedition to the region of disturbance. Though fully alive to my own deficiencies, I saw that here was an opportunity which ought not to be neglected, and I set eagerly to work to do the best I could. For geographical research, especially, the frontier region provided a wide and interesting field, for the greater part of it still remained unvisited by Europeans, and on the maps the country was a blank.

As the district over which we had to work was infested with robbers, an escort of two hundred soldiers was sent, under the

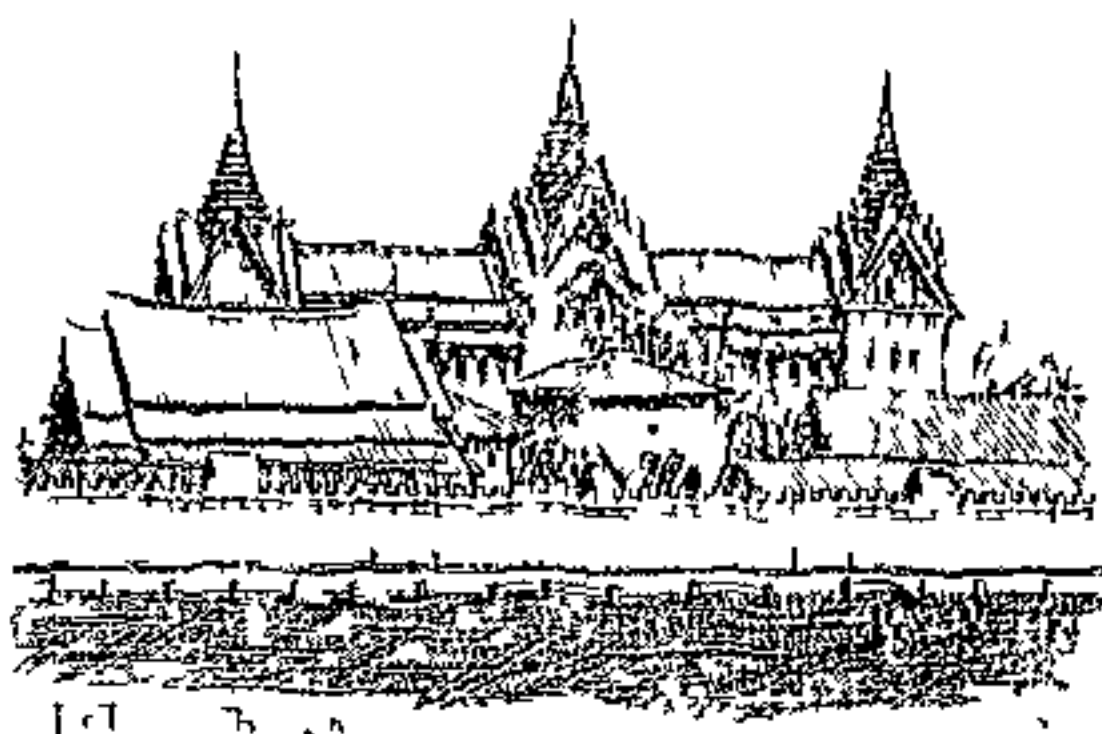
command of Leonowens, who had been fretting over his inactivity as head of the local cavalry.

Bush was very anxious to go, and urged his doctor to recommend that he should accompany the expedition. I had also seven Siamese gentlemen taken from a number I had hired to surveying.

The next thing was the selection of a lucky day and hour for our departure. In Siam the days and the hours have a strange influence on the actions of men, and I have seen a Siamese official seated solemnly on the back of his elephant, intently watching the minute hand of a fifteen shilling watch, so that he might be able to give the word to march at the precise minute.

We started at noon on January 16, 1884. The day was a particularly lucky one. It was high festival time, the festivities being in connection with the hair cutting of three princesses, daughters of the king. The hair on the top of the head of the better classes of all Siamese children from infancy is carefully attended to. It is neatly made up into a knot fastened by an elegant gold pin and usually encircled with a wreath of white, scented buds, which adds a most pleasing effect to the innocent and gentle expression of the little children's faces. The age of eleven or thirteen is that at which the ceremony of hair-cutting is performed, which merely consists in shaving off the top knot, the object of the mother's solicitous care for years. In the life of a girl, next to the wedding, this is the greatest event, and all friends and relations invite usually bring presents of money or jewellery, which are carefully put by and go towards her dowry at marriage. Such an event in the life of a princess is one of extraordinary festivity, extending over at least a week. To attempt a description of any single part of the ceremony would be to invite failure. As a spectator, you catch the common feeling of the crowd, mute and dazed, as the pageant advances, and you settle down in sympathy. You observe a number of Siamese officials of the first families, dressed in flowing white muslin robes, and tapering tall, white hats. These men are supposed to represent Brahmin priests. They are followed by girls dressed in cloth-of-gold, holding golden lotus flowers; then come the young princesses, richly arrayed in cloth-of-gold, and carried aloft on a heavily gilt and jewelled throne. The rear of the procession is brought up by women of all nationalities, subjects of the King of Siam, dressed in their national costumes — Malays, Burmans, Cambodians, Cochin Chinese, and

natives of Annam. Lastly, the king, dressed in state, receives the princesses at the Royal Pavilion. All this display is only preliminary to the great event, the actual cutting of the hair. This ceremony is performed by the king, who cuts off a lock, and by princes, who complete the operation by shaving the crown of the head.



131 A 29

131 A 29

CHAPTER VI

FROM BANGKOK TO KOI AI ELLIHANIS

THE Me Nam Chao P ia is a magnificent river. Me Nam is a generic term, *Me* signifying "mother," and *Nam* "water," and the epithet Chao P ia signifies that it is the chief river in the kingdom of Siam. The river always commands the admiration of the visitor fresh from Europe, but no matter how familiar it may have become, it has always some new interest or creates some impression not recognized before. The low banks fringed with fruit trees; the coco and areca palms gracefully swaying to and fro over the wooden houses that nestle in the shade, the gilded *wats* (temples) glittering through the leaves like a daylight illumination, the graceful pagodas occasionally peeping through the trees, form a varied scene that is most striking and beautiful. Enormous rice-fields stretch away towards the horizon, and are bounded by the outline of the fantastically shaped limestone hills of the sacred place of pilgrimage, P ia But (Gautama's "footprint"), and of Lopburi.

A steamer once in the channel can, day or night steam full speed to Bangkok without any fear of shifting shoals, and in this the Me Nam differs from the rivers of Burma. Only steamers of small draught (12 feet 6 inches is the limit) can cross the bar. The dredging of a channel to enable ships of heavy tonnage to come up to Bangkok has been advocated by some, while, on the other hand, there are those who say that the change would permit such a flow from the sea as to render the water at Bangkok unfit for use. It is a well known fact that, occasionally, when the rivers are at their lowest, just before the rainy season begins, the flood-tide renders the water brackish for some distance above the city, and widespread sickness is the result. This happens practically only when the rainfall of the previous year has been deficient.

Towards evening the towers of Bang Pain came in sight, and we came to anchor there for the night.

Bang Pain consists of two islands, on the one is the palace of the king, and on the other a Buddhist church in the Gothic style, with stained windows, pews, and altar complete. The place had enjoyed royal favour as far back as 1631, in the reign of Chao Prasit Thawng. On the island now occupied by the palace there had originally stood a humble building which the late king had called his "solitary box." He had been very much attached to the spot, had planted it out with mango-trees, and had escaped when he could to this peaceful retreat for rest from the cares of state.

The present king, out of reverence for all that his father had loved, adopted the place for his holiday resort.

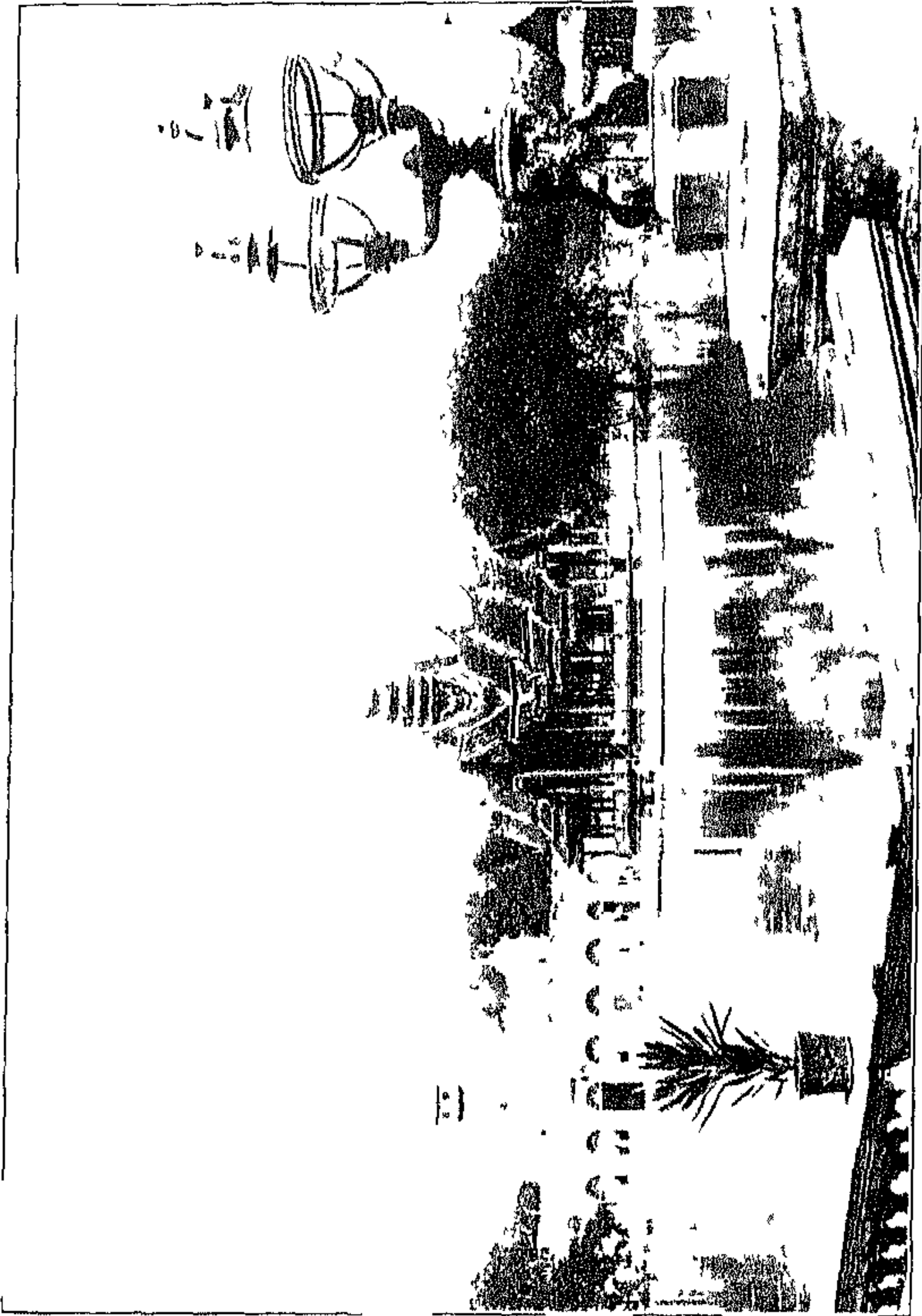
As we proceeded on our way up stream the flat stretches on either hand were seen to be covered with rice fields, while the river was alive with boats, which, with their white sails, looked like huge birds floating on the water. The banks in some places were riddled with holes, the nests of a speckled black and-white kingfisher, and of a green and rather large species of fly-catcher. These holes go as much as 8 feet into the bank. Some are on its perpendicular face, others are within easy reach of snakes, but the inhabitants tell me that the snakes do not enter the holes, as they are perfectly straight and narrow, and if a snake got in it could not get out. The birds appear perfectly happy, as though they knew no danger, and the two species seem to live together in harmony and peace.

In the evening we reached Ban Sik Dang, beyond which steam-launches could not proceed. This was the landing-place for Prabat. Preparations were being made for a visit of the king, and a broad road was being cut and cleared of jungle.

The Prabat, or sacred footprint, is a hole about 5 feet long and 2 feet broad in a limestone rock a short distance up the side of a precipitous mountain. It is surmounted by a small square temple of the kind called Maratop, the floor of which is covered by a mat of plaited silver wire. Year after year the spot is visited by pilgrims, some of whom explain that it is not a footprint, but merely a symbol of religion. Leaving the launches, we rowed along the river, which was now twisting in all directions between steep high banks.

We reached Saraburi on January 18. Our river journey was now ended, and the trudging was to begin.

Sarabuti is the capital of a considerable district but there is in all Siamese towns beyond the *uats* and *pagodas* there is nothing



PAVILION AT PANG PAI IN

of a permanent character. The dwellings are bamboo shanties and timber houses, the governor living usually in a house of the latter

description. No Siamese town has a settled appearance, the people seem to have inherited the roaming propensities of their forefathers, who, constantly engaging in war and either plundering or being plundered, seldom had time to become the founders of cities.

With the railway now running to Saraburi, it is impossible to realize the tedious preparations that were formerly necessary to secure transport.

For those who travel in Siam otherwise than by river, elephants and bullocks are the principal means of transport. The services of the elephant are absolutely indispensable to human welfare, and it is not strange that that animal should have come to be regarded as a national symbol. The albino, especially, is made much of.

Tourists who go to see the white elephants at Bangkok are disappointed to find none of the palace-like stables, the gold dishes, and the rites of worship, of which the accounts of earlier travellers are full. The romantic descriptions have no counterpart in the reality. The white elephant is not white at all, but dust coloured.

The expert tries to persuade the tourist that the colour is somewhat ashy, and draws attention to the pink eyes and to the white toe nails. But all in vain, the disappointed traveller, looking at the very ordinary beast before him, asks almost incredulously whether this is the celebrated white elephant renowned in ancient story.

The Siamese divide elephants into three classes for general purposes—great, middling, and small—*Sok 1 Kup* (90 English inches), $3\frac{1}{2}$ *Sok*, and 3 *Sok*. The first is put down as being good to carry 530 lbs; the second, 400 lbs, and the third, 250 lbs, these weights being for flat roads for mountainous country less. These, of course, are nothing compared with the loads of over 1000 lbs the Indian elephants carry in an ordinary way. There is no difference between the elephants of India and those of Siam. A great number of the latter are worked in the Indian Commissariat Department, and they are not to be distinguished from their Indian brothers. In India an elephant is better able to do his work because he is better cared for, and the pack saddles for the baggage are much better. The Siamese elephant is more or less wild, and breeds freely in so-called captivity.

During one of my marches a baby elephant was born, and the whole transport was disorganized. I had five elephants, and the mother had enlisted the services of two other females to help her in looking

a for the baby, so that I had to come to a halt and make new arrangements. When born, it was thirty inches high and scarcely as long. In a couple of days the little thing was quite lusty, and the three elephants were always near. It basked and slept in the sun, but if it suddenly awoke, the three rushed forward, and taking up their position round it, stood with trunks uplifted ready for the charge.

The Siamese howdah is well adapted for comfortable travel, for it gives protection from sun and rain, and from the jungle when the elephant is crashing through it. It also provides a splendid berth for the night, being well raised above the ground.

The average height of the full grown elephant is about 90 English inches, but I measured one that I once had with me, and found him to be 110 inches to the shoulder. One in Bangkok, 'P'ia P'rap,' was 105 inches high, his tusks crossed one another on the ground, and were ninety six inches in length. Sometimes he was highly mischievous, and thought nothing of overturning a water cart, or tossing a man several yards for amusement.

The bullocks look miserable beside the elephants, yet a great deal of the transport of the country is carried on by their means. These useful animals are controlled by a string through their nostrils double panniers of cane being slung across their backs. Some have their faces covered with bear and tiger skins, decorated with shells and looking glasses, with a plume of peacock's feathers to complete the head-dress. Sweet toned bells are fixed above the panniers and wherever one journeys the sounds of the bells are heard. It is said that the bullocks know the tinkling of their own drivers, and the keepers in the evening call them into the camp simply by sounding the bells.

Along the route from Samaburi to Koiat there was nothing of unusual interest except the forest known as the Dawng P'ia Fai, or forest of the Lord of Fire, which is known for its deadly fever. There hundreds of Chinese labourers were buried during the construction of the railway, and hundreds more will be buried before it is completed.

In the early morning of January 30 we marched into Koiat, the crenelled red-brick walls of which called to mind Chieng Mai, Lampun, and Lakawn. We knew at once that we were entering a Lao city, and the inhabitants were aroused from their slumbers by the martial notes of the bugles and the steady tramp of the soldiers.

CHAPTER VII

KORAT, IVY AND HILLS

By eight o'clock we had taken up our quarters outside the town, and later on we called to see P'ia Rajanarakun, a Siamese general who was in command of an expedition. Presenting the letter of introduction with which Prince Damrong had provided us, we were received with marked cordiality, and it was evident that the prince's letter contained an eloquent appeal on our behalf, especially urging the general to render us all such assistance as Europeans, implicitly acquainted with the Siamese customs, might require.

P'ia Raj told us that it was his father, the late Minister of the North, who had commanded the expedition against the Haw some ten or eleven years before, when he had been sent as head of the advanced section of the army, and had destroyed the principal position of the Haw, at Tung Chieng Kam.

We accompanied P'ia Raj on a ride through the city, the walls of which are enormous monuments of labour, but have a general look of decay. There are four principal gates, that on the south, called the P'itu Pi, being the gate through which corpses are carried, is in general superstitiously avoided, but P'ia Raj laughed at such notions, and we went through.

The north and south sides of the city according to the governor's statement, are each about 5400 feet long, and the east and west sides about 3200 feet. On the south side there are three small forts, each with 15 loop holes, while along the wall there are 1400 loop holes and 73 crenelles. On the north side there are four forts, 107 loopholes and 60 crenelles, on the east and west sides two forts and 861 loopholes along the wall. The walls are protected with earth of considerable thickness, and the berne is about 15 feet from the level of the road. The whole city is surrounded by a moat about 200 feet broad.

We passed through the western gate, and came on the Chinese quarter, where there were about 800 Chinese residents, with, as usual all the trade in their hands, and all the villainy too, gambling drinking, opium smoking, and the other vices being left to their control



WAT NONGWAN KORAT.

The head Chinaman said an improved road between Suaburi and Korat would benefit the country greatly, and considerably increase trade, the chief articles of which were rice, sugar, hides, and horns

Rice-fields surrounded the city walls, and to the north there is salt water from which large supplies of salt are obtained. The

water of the river, the Klawng Boiribun, a short distance to the north, is blackish.

The ruins of Wat Nomwar, less than two hours' journey from Korat, though not extensive, are very striking, and well repaid our visit. The temple itself is within a square enclosure, the walls of which, 200 feet long, are formed of rectangular blocks of stone (apparently sandstone) about 8 feet long, and 2 feet deep, and 3 feet broad, now tumbling in confusion. Each stone has circular holes a few inches deep, and the faces are perfectly smooth, without a trace of the stone-cutter's chisel. The gateway to the east is very elegant, with a plain cornice, and one block looks like the remains

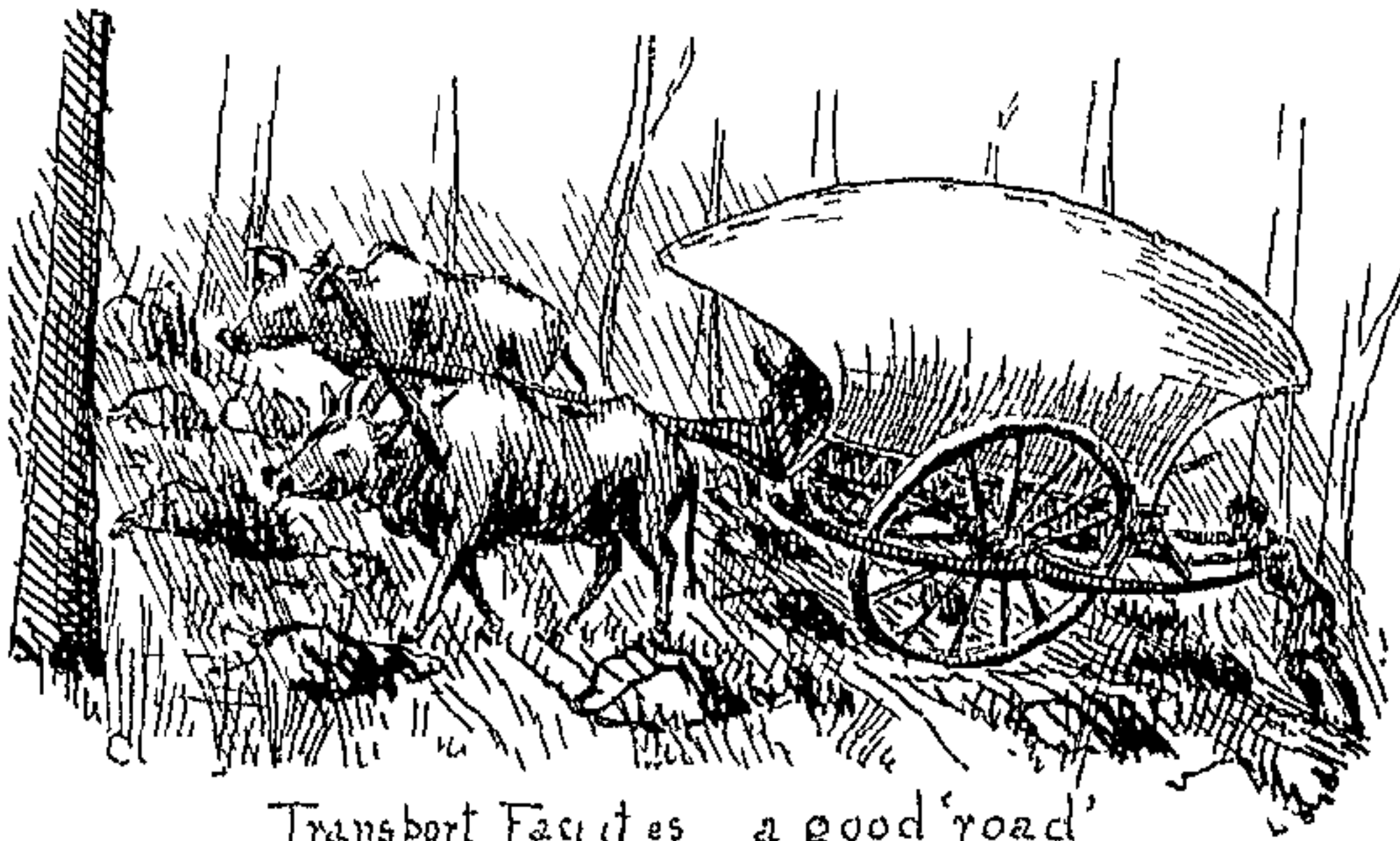


WAT NOM KORAT

of a fluted pillar. Lying on the ground are slabs which seem to have belonged to an ornamental doorway. One of the carved figures is a toad with human teeth, while the heads of two snakes are calmly lying one at each corner of the toad's mouth. Carvings of flowers are interwoven in elegant designs. The temple itself consists of two portions connected by a covered way, that to the east being apparently more ancient than the other but of exactly the same dimensions and style of architecture. The blank windows contain ornamental columns of stucco which have a strange appearance, and seem to be of much more recent date than the building in which they are set. The inside of the temple is vaulted, but no plaster is

visible. The vault consists of slabs of which the higher overlap the lower. The total length of the temple is 60 feet, and the greatest breadth 50 feet, the inside being full of Hindu idols, mostly of stone, some of them crumbling with age. On one of the slabs in the walls there are traces of characters cut into the stone, which cannot now be deciphered, but which need not be regarded as the remains of any important original record. For the builders of this temple were evidently men of discriminating taste, and neither the position of the inscription nor its form is such as they would have chosen for a memorial intended to be enduring. Some of the characters are only discernible by the aid of lamps, and the place is so dark and mysterious that the effect is dismal.

There are ruins of several other wonderful temples scattered over the Korat division, which once must have been full of intelligent life and industry.



Transport Facilities a good 'road'

CHAPTER VIII

THE KORAT PLATTAU TO NAWNG KAI

OUR first march from Korat was to Jachung, 1 mile distant, where we camped. The carts, placed lengthwise, formed a square about the encampment; immediately inside the carts the elephant-coups (howdahs) were placed, while the elephants and bullocks were fastened outside, with a sufficient amount of fodder for the night.

The next march was to Pimul, and, that we might have a day at our disposal for the examination of the interesting ruins reported to be in the neighbourhood, we marched double distance. The country was very flat with sparse jungle a great portion being under cultivation. In our route were two substantial wooden bridges.

In the evening we crossed the Pimul, a river of considerable volume, and entered Muang Pimai the ruined walls of which were scarcely discernible. The town had a cozy appearance in the deep shade of fruit trees and palms.

Next morning we visited the remains of Wat Paa Prang, an ancient temple which, though dilapidated, still a half familiar look the portico and the walls, with their pointed niches for holding lights recalling the appearance of a Hindu temple. The outside enclosure is about 200 yards square, formed of gigantic smooth blocks like those at Korat. This is however, on a grander scale in every particular. Besides the circular holes a couple of inches deep, I noticed that these had a deep incision in the form of a T, the foot of the T being at the edge of the block. It is difficult to arrive at a conclusion regarding the use to which the holes and T incisions were put. They may have been required for some lifting apparatus, or they may have been formed by the catches of the cases in which, as some think, the blocks were moulded. The temple proper stands in the centre of the enclosure, and is in the form of a square, with a tall, isolated tower at each corner. I entered one of these towers,

and found that the floor had been dug over probably in a search for treasure. The idols of stone were overturned and mutilated. The large sitting figure of Brahama had been overthrown, and the head with the hair drawn back and tied in a knot, had been knocked off. The figure was itself perfectly smooth, but on the base there were chisel marks, which looked as fresh as if executed the day before. There were other statues, the most remarkable being that of a woman in a kneeling posture.

Turning our attention to the temple itself, we measured some of the stones at the doorways, 9 feet high and nearly 4 feet broad. They bore ornamental tracings down to the floor, with little figures beautifully carved. The tracery over the doorways was exactly similar to that found on the ruins of Borobodur, near Jockarta in Java. The effect of the whole was very solemn and the visitor, gazing at a structure as to the origin and purpose of which he had no clue, could only lament his ignorance.

The governor afterwards told me that there was a block of stone with the impression of a man's foot and a dog's foot. I had to leave at 3 a.m., but I regret not having gone back late as it was, to verify this interesting statement. The governor was an old warrior who had fought against the rebel Cambodians in 1840.

Although it was late in the season, the 2nd of February, a night's rain had made the morning delightfully cool and exhilarating, and this may, to some extent, have accounted for the beautiful appearance of the country. As the dawn advanced, wide grass plains, interspersed with clumps of trees, lay before our view, the horizon soiled and fringed with a heavy jungle, and the tall waving coconut and arec palms indicated the positions of quiet villages. As we proceeded on our march the jungle dissolved, and further plains, with what looked like groves of fruit trees, spread out before us. The country had all the appearance of affording good sport, the swamps being covered with numerous varieties of aquatic birds. Buffaloes were seen that were said to be wild; and during the afternoon it was reported that some of these animals were near the camp. We went out, and having stalked them very carefully, experienced the excitement of standing for their supposed charge. Leonowens dropped one within 30 yards of him, and the men, thus supplied with fresh meat, were delighted. The animals had been described as 'wild,' now, however, it was mildly represented to us that they might be "considered

wild, ' as they had no real owners, and were in general left to roam wherever they pleased, being worked only when there was an unusually heavy harvest. We thus found ourselves in the somewhat ridiculous position of having stalked tame buffaloes, and had not even the satisfaction of knowing to whom amends should be made.

The next day's journey lay through precisely similar beautiful country, but the watermarks on the trees 4 feet up the trunks, showed that it must resemble a perfect sea during the floods.

Near our camp at Taluang we met with the usual scrub and jungle. Salt is collected in large quantities in the district.

From Pu Thai Song the route was at first very uninteresting, passing through forest of miserably small trees. A couple of marches further on the country became much more interesting, the forest trees were larger and the road undulating, which, however, was very rough for the poor cart bullocks. Both forests and undulating country suddenly stopped, and we found ourselves in wide salt wastes. On some of these places there was not a tree growing, and the heat was terrific.

The country we traversed was very sparsely populated, and yet there were evidences of extensive cultivation. Salt is procured there in large quantities, it appears in the form of an efflorescence on the surface of the ground, and on a cool morning has all the appearance of a hoar frost. The surface earth is scraped up and thrown into a rough trough, usually the trunk of a tree scooped out, which has a pipe at the bottom. Water is mixed with the earth and drawn off into a vessel. This process is repeated until no salt can be tasted in the water. The salt in the other vessels is separated by evaporation.

Nearing Kunwapi the country was particularly flat, with not a tree for miles. What was not under cultivation seemed to afford excellent pasturage for the numerous herds of cattle that were scattered over the plains. Beyond Kunwapi the road passed through excellent forests, where there were numerous tracks of wild elephants. We emerged from the forest into populous country, and, passing over extensive rice fields, reached Nawng Kai.

CHAPTER IX

NAWNG KAI AND WIENG CHAN

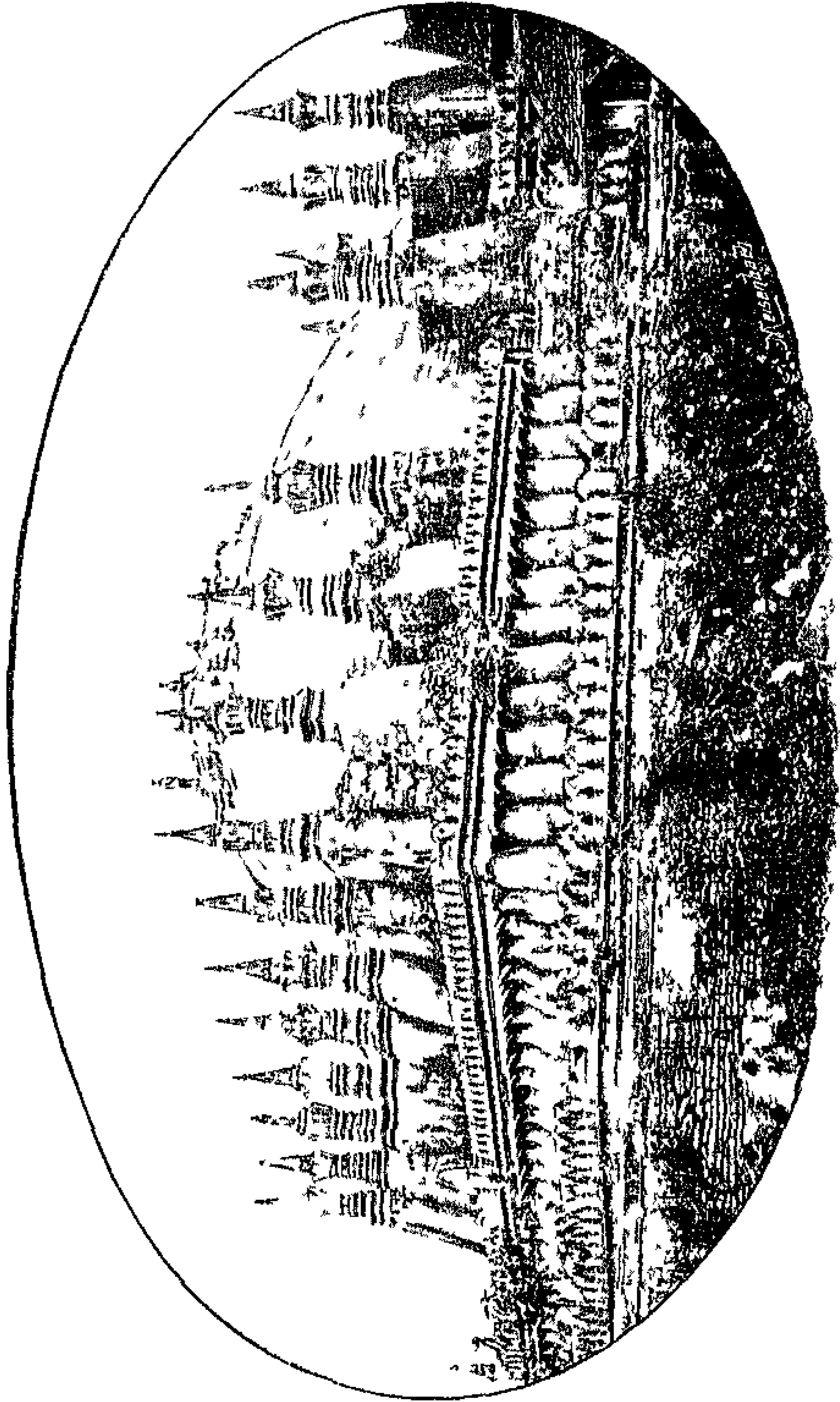
THE men had marched from Koiat at an average rate of 17 miles a day, the total measured distance being 283 miles. The general health was particularly good, there being no serious complaints, but most of the men had never fired a gun, and altogether they formed a very miscellaneous company.

Nawng Kai is the capital of a large district, having superseded the former capital, Wieng Chan, some miles up the river. It appears in its way, comfortable, rice, salt, and fish are plentiful.

In the town there are a number of Chinese shops exposing for sale Manchester calicoes, bearing the trade-marks of well known Singapore firms, and hardware of German manufacture. In the district raw silk, ivory, hides, horns, and salt are collected. This trade likewise is in the hands of the Chinese, and the produce from the northern and less accessible provinces also passes through their hands. The ubiquitous Shan pedlar is at Nawng Kai also, asserting his claims to a share in the profits of trade.

The town is on the right bank of the Mo Nam Kiang, which here is magnificent. From bank to bank the river bed measures 1000 yards, and when the river was at its lowest I found a discharge of 48,000 cubic feet a second. Great preparations were made to receive P'ia Raj. An archway was erected a few miles out, and priests went there with holy water, which they sprinkled on P'ia Raj while invoking blessings on him. To add *éclat* to the proceedings, Leonowens had his men drawn up to receive him. In the afternoon foot-soldiers, leading the procession, came in, then some minor officials on elephants, then the sacred image of Buddha, immediately followed by P'ia Raj. When he alighted from his elephant, a flourish of bugles made known the fact.

The governor was about sixty years of age, and blind. He had



FORTIFIED PAGODA NEAR WIENG CHAN, RUINED BY THE HAW

been made governor in recognition of the loyalty of his family to Bangkok during the Wieng Chan rebellion, at which time his father,

after having been pinioned and even kneeling before the executioner had nevertheless escaped.

Bush accompanied me to Wieng Chan, which, once a powerful city, had now the appearance of an ordinary village.

Near Wieng Chan is a very interesting pagoda, called Wat Lung, where religion and war are combined, the lower part being a perfect



OLD INSCRIPTION AT WIENG CHAN

fortress riddled with loopholes. The Haw had taken possession of it without opposition, and by means of ropes, in the search for treasure, had pulled off the spire, built of blocks of laterite rudely squared. They had then marched on the defenceless people of Wieng Chan, and had enriched themselves at the miserable natives'

expense. At that time there was a Siamese commissioner, Pua Maha Amat, at Ubon. Hearing of the doings of the Haw, he, on his own responsibility, came up, got the people together, fought the Haw who were about 800 strong, and totally defeated them. The last of the party took refuge in a wat, and speedily fortified it,



WAT (LAMPANG) FORTIFIED BY THE HAW

and made a few loopholes in the walls, but they were captured and executed. This band, in their lust for loot, had gone beyond their depth, and were completely cut off from their communications. The commissioner beheaded the unfortunate chief official of Wieng Chan for surrendering. Siam now awoke to the gravity of the occasion,

and equipped an army to drive out the Hlaw neck and crop. These robbers had entrenched themselves at Tung Cheng Kam, but they were quickly dislodged, and nearly all slain by P'ia Rujanaaku.

Wieng Chan was at one time subject to Luing Prabang, the authority of that province having extended over nearly the whole of the Me Nam Kawng valley. After Wieng Chan had rebelled and established its own independence, the unity and strength of the white bellied Lao was destroyed for ever. The Lao of the Me Nam Kawng are called white-bellied to distinguish them from their black bellied brethren inhabiting the northern parts of the Me Nam Chao.



LAO OF HUA IAN. A LANCET FOR

P'ia, who tattoo their bellies and thighs, while those of the Me Nam Kawng do not practise tattooing.

The story has it that when Chao Anu was Governor of Wieng Chan, about 1823, his son was called down to Bangkok in charge of the men summoned to assist in digging the canal that was to connect Tachin with Bangkok. It would appear that the official in charge of the undertaking after kicking the young man, added a flogging, and when the youth returned home, his father, indignant at the insult, rebelled. The army sent from Bangkok totally destroyed Wieng Chan, but Chao Anu escaped to Anam. Following the advice of the King of Anam, he withdrew to Chieng Kwang, but

the governor of that town made known his place of refuge to the Bangkok general, who again moved against him, seized his person, and sent him a prisoner to Bangkok where he was exposed over the river in an iron cage till he died. Some say one of his followers succeeded in conveying to him poison, which he gladly swallowed. At this time Chao Noi was the Governor of Muang Puan. The King of Anam, hearing of the end of Chao Anu, sent up an army and seized Chao Noi, who was taken to Anam and executed to death, his five sons being held in captivity. The King of Anam then sent up Chao San, a cousin of Chao Noi, to be Governor of Chieng Kwang together with 3000 men to support his authority. At the instigation of Chao San, the Siamese general at Nawng Kai marched with a force against Muang Puan and at midnight attacked the Ananites, slaughtering them almost to a man. Chao San then went to Bangkok, and Puan was left pretty much to its own devices.

When Tuduk ascended the throne of Anam he liberated the sons of Chao Noi—Chao Po, Chao Top, Chao Po ma, Chao Ung, and Chao Kam. When Chao Po returned, instructions were sent from Bangkok to Luang Prabang to invest him with the powers of governor.

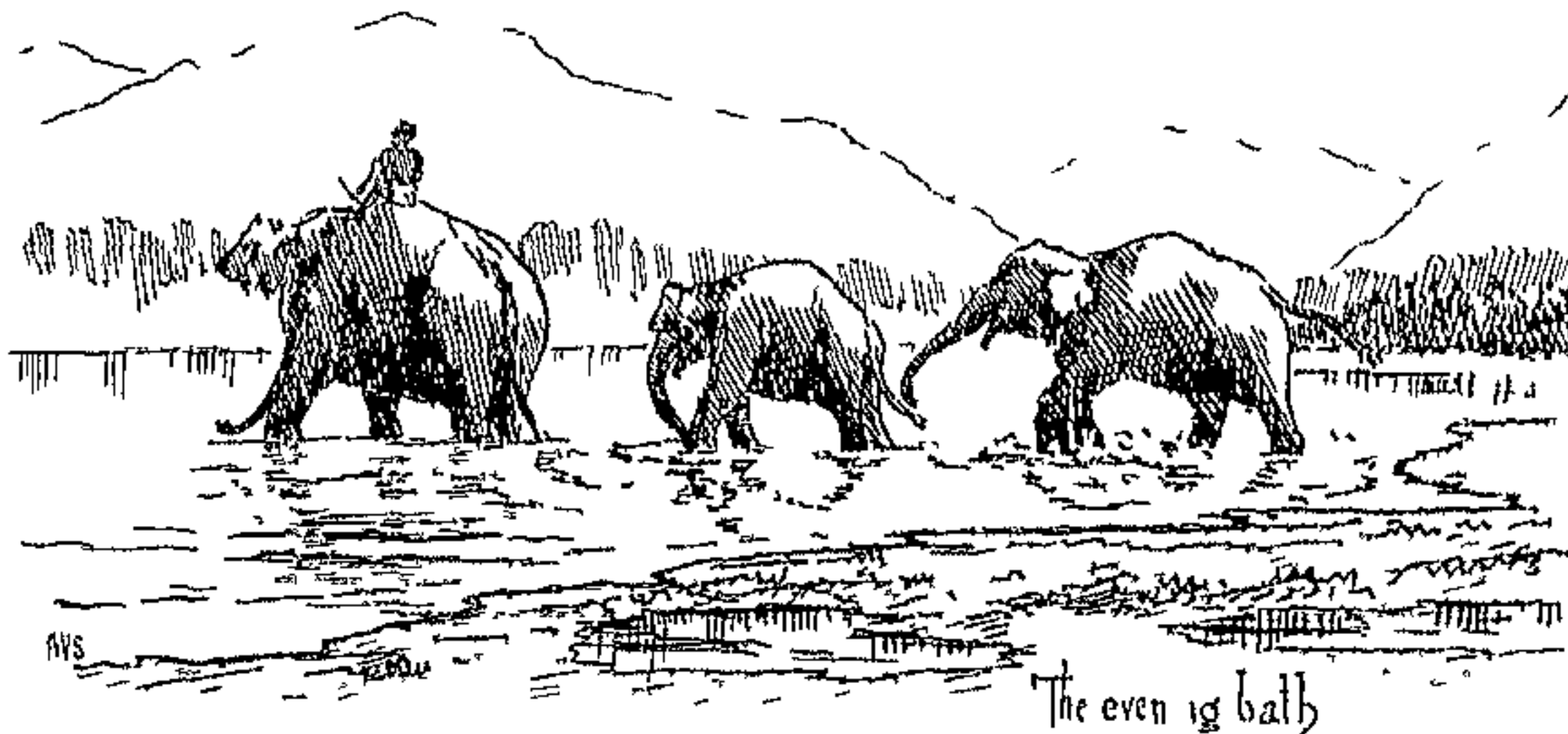
Chao Po was succeeded by his brother Chao Ung, during whose governorship bands of Haw poured into Puan. He was killed by them, but his death was amply avenged in 1873 by the Siamese generals Pua Maha Amat at Wieng Chan, and Pua Raj at Tung Chieng Kam, where they had made their principal stockade. Pua Pinom Sarain, a nephew of Chao Noi, was appointed by Pua Maha Amat temporary governor, and after Chao Kanti, the son of the unfortunate Chao Ung, was made governor.

Chieng Kwang was to be the chief object of our explorations. We were told it was utterly uninhabited, and that arrangements for securing supplies were next to impossible. Our preparations had to be elaborate for travelling through a country which it would take us twenty-five marches to cross, without the chance of meeting any one except, perhaps, a band of Haw marauders who would be certain to interfere with us.

It was interesting to observe the behaviour of the elephants when they were being sent across the river. Some swam over quietly enough; some, after making an emphatic protest, gave way, but there were others that could not be impelled, even by goading with

spars or by the application of fire they rustled back, and nothing could force them over. For these the men had recourse to another process. Having lashed together three ordinary dug-outs, they laid spars across them, about 4 feet long and 3 inches in breadth and thickness, and on these placed a flooring of 1 inch planks, covering the whole with plantain stalks and other fodder. I was doubtfully considering whether this extemporized raft was strong enough to bear even one elephant when, to my surprise, three walked on board and were safely carried to the other side. In this manner the transference of the animals was completed and we prepared to start.

Bush went by boat to Luang Prabang and Leonowens accompanied me. We crossed the river and pitched our tents for that day. The old blind governor gave us all the assistance he could, and said we were certain of luck, as the day was cloudy, and the wind that was blowing to the north was curbed by angels clearing the way.



The evening bath

CHAPTER X

AMONG THE MLO

THE first five marches lay over a very flat region in no way interesting, but we passed several villages which belied the total desolation we were led to expect. The country did not strike one as being particularly prosperous or fertile; swamps occurred with their usual frequency.

One morning I saw a striped hyena standing under a tree. The camp pariah dog gave chase, but I called him back. On nearing the jungle the wily hyena stopped and turned round, seeming very much disappointed and looking longingly after the dog. As usual, my gun was nowhere. As we went on, tales of the Haw were brought in, agonizing accounts of their raiding on villages, whose inhabitants they had slaughtered, mutilated, or carried into captivity.

Near Somdi the country became rough and hilly. Somdi itself was an interesting camping ground. A village stands on the right bank of the Nam Lik, a considerable river, the water of which is very clear. The camp was pitched within an old stockade, the palisade of which was still standing.

A single incident will illustrate the extraordinary dread with which the Lao regarded their enemies, the Haw. At night, when the whole camp was fast asleep, one man shouting in nightmare struck such terror into his companions that they raised the cry of "Haw Haw!" and bolted in fearful confusion.

Beyond Somdi, travelling through heavy jungle which protected us from the scorching sun, we came upon a village beautifully situated at the foot of a lofty mountain. The people were interesting settlers from Hua Pan Tang Ha Tang Hok. The Haw having plundered their former homes, they had sought refuge here.

A great number were suffering from *goutre*, which may have been due to the limestone which is plentiful in the neighbourhood. The

peaks of this rock assume all manner of grotesque shapes, some looking as though they were the remains of old fortifications. The inhabitants cultivate rice, cotton, and indigo for local use. They also extracted a blue dye from a creeping plant called *buck me*, and a black dye from the bark of a tree they call *nung teng*. The leaves of the indigo plant are collected and soaked in water for three days, they are then squeezed, and the liquid mixed with lime, which is allowed to settle for a day, the water is strained off, and the residue forms the dye. The leaves of the *buck me* are treated in the same manner as those of the indigo plant. For dyeing black the bark of the *nung teng* is beaten fresh into a pulp and mixed with water, in this mixture the cloth which is to be dyed is soaked, and then dried in the sun, the operation being repeated on four or five consecutive days, after which the cloth is washed in a stream and is ready for use.

One of the headmen, dressed in a long red shirt, told me he had the devil in him, and that he would remain in him for another three or four days. The only way he could satisfy him was by long drinks of home brewed spirit. The condition of the man showed that the devil had been indulging in long drinks, and I remarked to the possessed man that the devil should be satisfied. He told me that it was appointed for him to remain four days longer, and there was no help for it but to give him drinks.

We were told that Chro Ann, when fleeing from Wieng Chun to Anam, having taken this route with elephants, had been obliged to abandon the elephants on account of a difficult pass. I went ahead to see about a road. Elephants could certainly not ascend the path. The hill was well clothed with forest, but every now and again great limestone cliffs projected above the surface, and brought one to a standstill. However, by evening an elephant track had been found with difficulty.

There was no fear of the noble elephant refusing to do his duty, it was the drivers who were up to all manner of tricks, and if we could we would gladly have dispensed with them. When the animals advanced the drivers hesitated, but a judicious mixture of language persuaded them to pluck up a little courage, and in a very short time all the elephants passed the supposed danger, slowly surmounting the hill 4400 feet above sea-level.

We encamped below the top of the pass near a village of Meo

(Chinese, 'Min' tsee). This people, beardless and very Chinese in their physiognomy, though in their general appearance reminding one of the Afghans, we found interesting. They dress in black, the men wearing loose trousers, a long, loose coat and a neatly folded turban, while the women have the feet and legs bare to the knee, to which a petticoat reaches with graceful folds which, in walking, they have an art of displaying to the best advantage. The female toilet is completed by a jacket with a sailor's cape, a neat turban, and designs in embroidery sometimes of silk, adjusted here and there. The principal ornament is a circlet of silver with a small oblong pendant attached, having on one side a Chinese device, and on the other Chinese characters which they regard as a charm against evil spirits. The Meo have no written characters of their own. The headman wore a Chinese pigtail, the others had the top of the head shaved, and allowed their hair to hang loosely over the shoulders.

They seem a hardy race, consisting of ten or twelve different tribes, but I could not get the same number from any two men. Their chief occupation is the cultivation of opium. They are happy in the selection of mountain tops for their abode, where they always enjoy a cool climate, and they have a prejudice against remaining on level ground, even at tolerable elevations. The Lao say of them that they cannot live where the sound of the frog is heard. When they are satisfied that they have exhausted the soil in one neighbourhood, a general survey of the surrounding country is taken from an eminence, and if a limestone locality is observed, some of the community are sent to explore and report.

In these limestone regions the frequent jagged ridges are no indication of infertility. The soil at their base is very rich, and a Meo told me that he has been able to grow Indian corn for seven years in succession on the same plot of ground.

Having decided on the new site for a village a few families make a start, collecting their dogs, goats, poultry, and occasionally a few bullocks used for transport. The men carry the things required for daily use, the women have their babies slung over their backs, while even the children are loaded. They form apparently, a merry party, and when they arrive at the chosen site, which is always near a spring, they at once proceed to form a clearing. The trees cut down are roughly hewn into planks, and serve as timber for the sides of the new dwelling while shingle is used for the roof. After a

settlement has been effected, household arrangements still maintain their simplicity. Ventilation presents no difficulty, and the smoke from the domestic hearth finds an easy exit between the planks. Water is sometimes brought down in bamboo pipes, and the wooden tub which receives it has a close fitting cover to keep out the dust.

In the villages women may be seen busily employed in the tasks which, in the division of Meo labour, have fallen to their lot. Some grind corn in neatly formed hand mills, some prepare indigo for dyeing, while others weave cloth, or execute elegant designs in cotton or silk embroidery. The villages are cheerful and nearly always picturesque from their position and surroundings. On one side are fields of Indian corn or vegetables, on another are hemp fields or plantations of tobacco, and there is always a wide stretch of land devoted to the cultivation of the poppy. In the month of February the poppy fields are in full bloom, and the large blossoms, tinged with every shade from pure white to deep purple, present a magnificent appearance. Here, also women are employed, and may be seen moving from plant to plant with china cups, collecting the opium that has been thickly oozing from five or six incisions in the pod.

The Meo are careful of their cattle and ponies, often placing them on platforms above the ground, and they are provided with sheep-dogs of an excellent breed, some of them tailless.

Like all who cultivate the hillsides, these villagers spend several months every year in felling trees on the slopes. The area cleared is thus constantly extended, a new plot being always under preparation. But when the felling of timber in one place begins to exceed reasonable limits, then it is time to search for 'fresh woods and pastures new.'

The Meo bury their dead near the village, building a tomb of stones and earth. With the corpse is placed a cock, a white one being preferred, a bowl of rice, and some liquor to cheer the spirit on its way.

CHAPTER XI

IN THE TRACK OF THE HAW

WE were now in a country under the direct influence of the Haw

Ten years before Pua Raj had destroyed the stronghold of these robbers, but on his withdrawing from the district they had returned, and had ever since been extending their sway over Puan

Who and what were these Haw that brought so much misery on large tracts of country, and established such a name for cruelty as to terrorize a whole population? They were in a word, Chinese brigands. At one time Chinese traders known in Luang Prabang as Haw came down from the north in great numbers to traffic with the inhabitants, and when the peaceful traders gave place to brigands of the same nationality, the name of Haw was naturally transferred to these. Since the appearance of these marauders, communication and trade had ceased, and the whole district had been thrown into confusion. Their robberies were on such a scale as to suggest that they formed the advance body in some great movement, and the information I was able to gather showed that Chao Fa Wong, the Governor of Yunnan, was, in fact, the head and centre of their scandalous proceedings. When the French were at war in Tonkin he sent orders to the band of ruffians wandering over the Luang Prabang district, commanding them at the peril to attack the French.

It was about the year 1870 that the depredations began, the plunderers rapidly overspreading the country near the Tonkin borderland. They overflowed into the outlying provinces of Luang Prabang, Sibsawng Chu Tai and Hua Pan Tang Ha Tang Hok (the five divisions to which a sixth was added), and also into Chieng Kwang or Muang Puan. Up to that time the provinces had been fully peaceful, and the taxes regularly collected, those due to Luang Prabang having been collected by an official who was living in 1893. After the depredations began the whole scene was changed, and the

murderous and pillaging bands advanced without interruption as far as Wieng Chan on the Nam Kawng where, as already mentioned, they received a wholesome check, but not before they had effected an immense amount of mischief.

Their route could be traced by the ashes of villages, and by evidence they had left within temples and pagodas where they had dug up



CHAO KAN II, GOVERNOR OF MUANG TUAN

the ground in search of buried treasure. In this search, so skilful had practice made them that, in many of the temples, only the few places where treasure was likely to be hidden were found to have been dug, the rest being left strictly untouched.

We were shown a proclamation brought down by some people who had escaped from a village plundered by the Haw. Written in Lio, and having a square Chinese seal, it called upon the inhabitants to come out and acknowledge the Haw authority, threatening death without escape in case of disobedience, for whoever fled to Lung Prabang would be pursued and seized.

These poor people living in the forests and cultivating the mountain slopes, had a wretched existence for, while thus harried, mutilated, and slaughtered by robbers, they at the same time complained of the oppression and extortion practised by their own governor, Chao Kanti.

The Haw were in movement 180 strong, only two days' march from us, and it seemed that we were likely to encounter them. Our soldiers were therefore brought out to practise with their rifles, but most of them were scared by the report of their own guns, very few could hit a large target 80 yards distant, and of the snider cartridges about sixty per cent missed fire. Everything considered, it would be dangerous to meet the Haw with such raw and unsatisfactory material. If our men should be unable to keep them ground there would be nothing to restrain the Haw, for it would seem as if they had defeated Royal troops, and it would be hard to say where the mischief would end. We therefore decided to take only thirty men with us, sending the rest of the camp to Luang Prabang so that, should the worst happen, the Haw would not have very much to boast of.

As we were starting some of the people came down from their hiding places in the mountains, and we engaged them at half a tical a day to help in cutting a path through the jungles, and to act as our guides.

Along the paths there were a great number of sharpened bamboos, which to men with boots were nothing, but caused fearful wounds in the naked feet of some of the men. Our march, however, before long became possessed of more agreeable interest, for the road, once a regular made road, was nearly level, and lay among gently sloping hills covered with long leaved pines, through which the wind whistled pleasantly, while the ground was covered with bright flowers. We came in sight of the abandoned fields of a village where the beauty of the scene was such that involuntarily we stood still to gaze. I wonder how much our experience of the uninteresting angle, where we had been plodding completely in the dark, had to do with our feelings?

The forsaken fields, here over 4000 feet above the sea, white with waving grass, seemed as though still cared for, and the hills without wood, except here and there a clump of trees, were clothed with a soft verdure, which in the light of the setting sun looked like purple and gold.

On the banks of a clear but sluggish stream we found a convenient spot on which to pitch our tents.

Some precautions having been taken against lurking Haws we turned to examine an adjacent wat. The building was interesting from the outside, the architecture, while similar to that seen throughout Siam, being more delicate and refined. The doors were richly enameled, but the interior had been thoroughly plundered. A large copper figure of Buddha lay on its side the pedestal on which it had stood having been searched for treasure. In the *débris* there were numerous images much sought after by the men. Most temples had the ordinary sitting figure of Gautama, some of brick and mortar heavily gilded, others of copper while others again were of a composition of gold and copper. All metal statues known as *Gautama pett* are ancient and are so called (*pett*) from the position of the feet. This is the chief distinction, but there are other marks showing one figure to be more sacred than another.

Many pretty pagodas reared their graceful forms invitingly, but we could not venture far from the camp when every bush might conceal a Haw. The wats had been wantonly destroyed and piles of palm-leaf records lay heaped together, which unless soon looked at, would be lost for ever.

The country was still improving, with medlar trees in blossoms, cedars and pines shooting forth new leaves, and the slopes stretching to the north-west and south clothed with fresh green grass springing up among the ashes of last year's growth. Suddenly we came on a charming little lake, Nawng Tang, at an elevation of 4000 feet above sea level. It was over a mile long and half a mile broad, and never dry. On the east side stood a lime cliff about 100 feet high.

The deep blue sky reflected in the bosom of the lake, and the intense stillness, only relieved by the motions of the water fowl, deepened the pleasurable sensations which the beauty of the surrounding landscape excited.

The origin of the lake, according to local tradition, was on this wise: Where it now stands, a village formerly stood. A huntsman of that village shot a white faced deer, and on that very night, amidst storm and earthquake, the village and its inhabitants were swallowed up by the waters, which thereafter formed a lake.

Notwithstanding the beauty of the country, there was no sign of

human life as far as the eye could reach. We met with some peafowl, rarely found at so high an elevation and as tigers keep company with pea-fowl, we were not long in finding traces of them. Partidges were plentiful as also were deer. We passed over the sites of many battle-fields, and at Kung Koi we remarked the traces of an old stockade.

We crossed the Nam Tang a small stream running in a channel whose banks were over 100 feet deep, and about 800 yards apart. The valley was well suited for rice cultivation. On ascending the bank of the stream we met with other surprises. A vast plain, called Kung Ma Len ("Ponies Play ground"), about 6 miles broad and 10 long, and about 3500 feet above sea-level, stretched as flat as a table before our view. It was covered with fine grass, and had afforded excellent pasturage for cattle, which in better days had fed there in great numbers. We rested under the shade of a pine tree, and easily distinguished the snake like course of the pathway as it ascended the gentle slope of a hill.

On the right rose a particularly beautiful pagoda, whose glittering whiteness was intensified by contrast with the blue sky. It looked like some spirit brooding over the stillness of the lovely solitude. In the distance we beheld objects which, to our surprise, looked like tents, on nearer view the tents seemed to give place to cattle, our wish being doubtless first to the thought, the cattle, when subjected to the telescope, were transformed into rocks, apparently cropping up from the surface of the ground, and these, as we approached them, proved, to our astonishment, to be gigantic stone jars. Some of them stood erect, some were lying on their sides, some were in fragments, and all round there was evidence that the ground had been excavated. Beneath one of them we dug up the earth and found traces of charcoal, with what appeared to be an anklet of rusty iron. The tallest one was leaning, its sides were straight, and measured, one 7 feet 6 inches, and the other 6 feet 4 inches above the ground; it was 19 feet 5 inches in girth about the middle, and was 1 foot thick. Another, better shaped and provided with a neck, was very much tilted over, it was nearly 6 feet high, its girth at the widest was 25 feet, and the diameter of the mouth 4 feet 6 inches. Embedded in the substance of some of the jars were nodules of quartz. Beside them lay several flat stones, one of which was 7 feet long, and 6 inches thick at the edge, but much thicker at the centre, while a smaller one, on being

turned over, showed three prominences 2 or 3 inches long, rising about an inch above the surface

These vessels are such as could not possibly have been carried to their present position, but must have been made *in situ*. The local belief concerning them is that they were formed by angels to serve as drinking-vessels

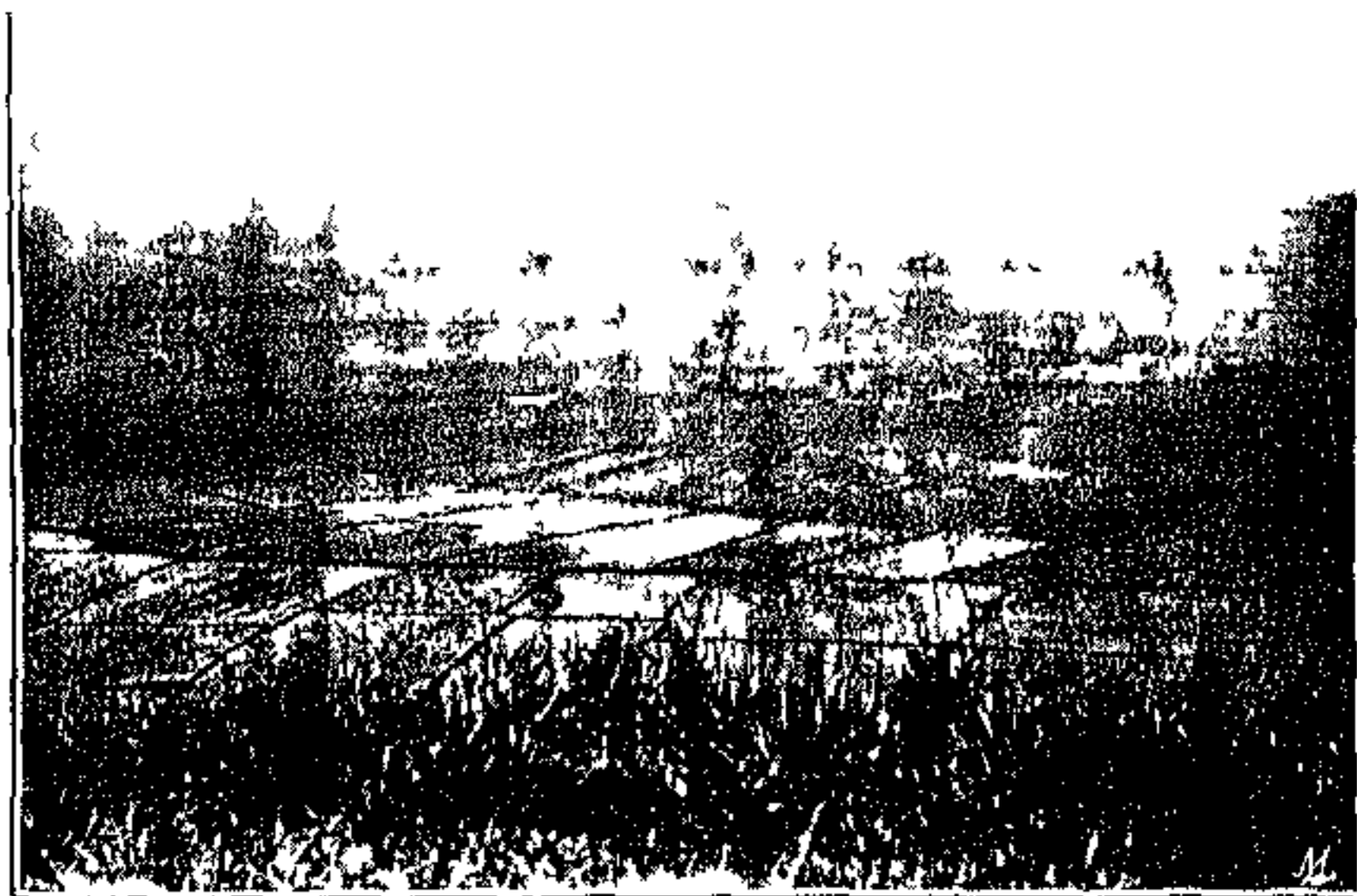


CHAPTER XII.

THE CHIENG KWANG HIGHLANDS

RESUMING our march, we passed along narrow valleys which had at one time yielded plentiful crops of rice, then crossing a jungle ridge, we descended into the valley of Chieng Kwang, the capital of this beautiful country.

This valley, about half a mile broad, is over 3000 feet above sea level, and on each side the mountains rapidly rise to the height of



PLAIN OF CHIENG KWANG

another 3000 feet, those to the south being well wooded. The whole valley is well adapted for the cultivation of rice, of which as many as three crops can be raised annually, the irrigation of the fields requiring scarcely any labour.

We were met by the headmen of Chieng Kwang, who were well clothed, and welcomed us with presents of rice. They guided us through rice fields, which were being flooded in preparation for the sowing, and our progress was more like plodding through tanks than walking along a road.

Where was the great city, defended, according to report, by 4000 fighting men? Rounding a spur of hill we got an unimpeded view of upwards of two miles, at the end of which was a low hill covered with jungle and surmounted with a pagoda. This, we were told, was the city of Chieng Kwang.

This city was now under the sway of the Haw, and the inhabitants found their new masters very exacting. The robber stronghold of Tung Chieng Kam, three days distant, had recently suffered from an accidental fire, and the people of Chieng Kwang had been compelled to provide a company to assist in the repairs. Chieng Kwang stands at an elevation 3770 feet above mean sea-level, on the hill called Pu Kio. At its best, within the memory of the oldest inhabitant, it was but a collection of wooden houses. Across the Nam Nia, along a spur overlooking the plain, were still the remains, almost perfect, of extensive earthworks, constructed at the time when Chao Anu was captured and taken to Bangkok.

It is the custom of the Siamese, when building wats and pagodas, to make offerings of jewellery and money, which are placed usually under the sitting figure of Buddha, or in its breast, or are buried in the floors of the wat, exactly in the line of sight of the figure.

These places, when the Haw ransacked the city, the inhabitants were compelled to dig up, while their plunderers stood by, sword in hand, directing the proceedings.

The pagoda on the hill, the finest in the region, had not escaped. From a distance it looked perfect, but on a nearer approach rents were found on three sides, almost from the pinnacle to the foundation. It was wonderful that the spire, 30 feet high, had not fallen in. The Haw are said to have obtained as much as 7000 rupees' weight in gold from this pagoda. Fragments of urns which had contained offerings, lay strewn about, and still showed elegance of form.

The Muang Puan population exhibited refinement in all they did, but their elegant taste was of no avail against the rude barbarian. The original inhabitants were Kaamu, in whose time the country was called Muang Ka Patum. It would appear that the region was once

ravaged by the Burmese under a king whose name was *Pia Chao Raja* (' the rat '), who ruled at *Hongsawadi* (Pegu)

Little is known of the history of *Chieng Kwang*. Its early inhabitants, if not powerful, must at least have been industrious. Now the population belongs to the ordinary Lao stock of *Luang Prabang*, with precisely the same written and oral language.

The Siamese and Lao are of one race, with a common language and the same type of countenance. It would be impossible, in a mixed crowd, to say which were Lao and which Siamese.

Leaving *Chieng Kwang*, we crossed broad paddy lands, which being boggy, caused considerable trouble to the elephants. The



IN MUANG LUAN

heavy creatures kept sinking and struggling, until the clever Siamese provided them with a firmer footing. This they did by slitting and weaving together some bamboos into a mat, which they stretched over the bog and pegged down. Over this fragile bridge the animals passed in comfort, apparently grateful for the relief which had been afforded them.

Struggling over a hill and through nasty jungle, we crossed a spur and saw stretched before us *Muang Tang*.

The features of the region were similar to those with which we were already familiar; the fields were abandoned, and there was not a trace of human habitation. Again and again we swept the country with our glasses, but to no purpose.

Pitching our tents near an old burnt stockade, we strolled over the remains of a village, apparently recently prosperous, and saw several plundered wats and pagodas.

Leaving Muang Tang, we passed other villages in ashes, and stockades, where the people had made a feeble stand against the Haw, who, it would appear, had committed these depredations only a few months previously. The stockades looked as though they were at least some two or three years old.

We ascended a heavily wooded hill about 6000 feet high, near the top of which was an old obstruction across the path. From the top of the hill, Muang Ngan could be seen lying at the foot, for on the southern slope there was not a single tree. The town is at an elevation of over 4800 feet, and the climate is delightful. The place looked rather cheerful, as we could see houses in twos and threes nestling together, and rice was being planted. As we approached we saw the women running with their children, and the buffaloes were driven away, and it was plain that the people took us for Haw; but, sending on men ahead, we succeeded in reassuring them, and they returned.

The head man, named *Thi Muang Chien*, put in an appearance and he gave us the story of the troubles from the beginning.

Two French priests had been living at Muang Ngan for upwards of ten months, their names, as far as I could make out, being Father John and Father Antonio. *Di Neiss*, a French traveller, who had come about six months before our arrival, was the next European visitor, Chao Kanti being there at the time. *Di Neiss* had scarcely reached Muang Ngan when he despatched a letter to the Haw of Tung Chieng Kam, from whom a reply was received in due course. *Di Neiss* then told the people that the Haw were coming down on them, but that, if they agreed that the country should belong to France, he would remain and help them. On their replying that they had no power to hand over the country, he rejoined that he would hold them responsible if the Haw stole his baggage and stores. To this they would not agree, but offered to take his property with them into the jungle, and when the Haw withdrew restore it to him. He thereupon deposited his baggage in a house, outside the door of which he affixed a written placard, stating in Anamite that the country belonged to the King of Anam, and that if the Haw damaged his property he would appeal to the king for justice. When

the Haw came down, Di Neiss went to Nawn, Kai and the two priests to Anam. The unfortunate people were shut up in their stockade, their houses burnt, and cattle slaughtered. For three days they held out; then their ammunition was spent, want of water forced them to terms and they had to pay heavy ransoms. The Haw then amused themselves by applying thumb screws to persons who had been the special objects of Di Neiss's generosity, forcing them to surrender the guns he had given them, and finally turned their attention to the foreign settlement, burnt the priests' houses, and scattered Di Neiss's few clothes and books in the streets.



UT DIA

CHAPTER XIII.

ON THE ML KAWNG RIVER

MARCHING from Muan_g Ngan, we left the beautiful plateau country and got into the jungle and rough footpaths. Our tents, pitched near a patch of Indian corn, were visited by the women and children, who usually took refuge in these out-of-the-way places from the Hlaw. I was surprised to see the children wearing rupees as ornaments round their necks. The rupee was, in fact, the current coin of the district, having been introduced by the enterprising Taungsus of Burma, who were everywhere to be met with, carrying their packs of small goods. It gave something of a shock to be told that they trafficked also in slaves, exchanging opium for men and women, the unfortunate captives of the Hlaw.

We pushed on to Ta Tom, which the Hlaw, after settling with Ngan, had hastened to plunder. Only two huts were now standing, the rest having been burned, and a number of the miserable inhabitants had been carried off to Tung Chieng Kam. The coconuts were abundant, and as there was none to claim them, our men helped themselves liberally. The place seemed to have been important, with a great deal of land under rice cultivation. From Ta Tom the Nam Chan was navigable, and we prepared to make the most of it.

The elephants having had a rough time, we decided to send them back to Nawng Kai without loads. Having quickly constructed rafts of bamboo, we pushed off, and were borne past many coconut trees and several sites of villages, but we met no inhabitants. Our night's quarters were infested with insects in great variety, among which mosquitoes played a prominent part.

The river was very narrow, and lined on both banks with thick

jungle. Our bamboo rafts had to bear a good deal of knocking about and some of the rapids gave us trouble, but at last, on May 11, we reached Bon Kam Ahken where we changed our craft for small dug outs. Here there was a new settlement, ruled by Chao Kanti's cousin.

We now pushed merily on to the Me Kawng, which was rising rapidly, and reached Nawng Kai on May 14.

There were a great number of boats, and the place looked as though a brisk trade was being carried on. Harbours were effected mainly by means of rafts, many of them 60 feet long which looked like floating bee houses. They were arranged very comfortably for travelling, and could descend the river as far as Kemnat, below which point the rapids are too strong to allow anything to pass.

We started from Nawng Kai on May 15, the gongs and drums of the wats sounding very prettily. The notes fall regularly on the ear, first the gong, then three beats of the drum, then another gong an octave higher than the former. The drums are 4 feet long, and $2\frac{1}{2}$ to 3 feet in diameter, the drum head being raw hide.

At Kaw Keng the river narrowed and ran between immense blocks of rock. At Ban Ang the scenery became very pleasing with low undulating hills that looked as though they had once been under cultivation, down to the river-banks. Here the river narrowed to 100 yards, and as the men could no longer pole against the stream, we made slow progress, pushing along the side from rock to rock.

At Ken, Muk more serious difficulties began. The river now became perfectly wild, with huge rocks in every direction, their surfaces glittering with a metallic lustre, now green, now black like coal. These colours must have been caused by some deposit from the water. At Nawng Chieng San there was a sort of lake cut off from the river by piles of silvery sand and huge rocks, and here, at the proper season, great numbers of fish were caught. The whirlpools were very violent, and often, when struggling against the downward current, we were caught in an eddy and hurried swiftly up stream past the opposing rocks.

On May 21 we reached Chieng Kan, with much trouble, one boat (fortunately recovered) having been swamped at Keng Chan. The nights were very stormy, and once I awoke as if from a nightmare,

to find the stern of a boat driven through my boat's covering and settling on my chest. My friend, Leonowens, was on board the craft which was in danger of sinking mine, but, though I shouted, he continued his slumbers undisturbed. With very great difficulty I managed to push off the intruding boat, but in doing so got soaked to the skin. There was now no protection for me against the weather my boat's covering having been hopelessly rent, and by morning I had taken a severe cold. This incident was all the more irritating, as I had suggested, in view of possible storms, that the boats should not be tied too close together; but they must have shifted their positions after I retired to rest.

After changing boats and men at Pak Lai we proceeded on our way. The river had now straight reaches for long distances, and looked extremely wild. Enormous rocks lay all over the channel, well wooded mountains descended to either bank, but there were few villages. Above Keng Luang an awkward and long rapid, the journey became more agreeable, and from Muang Nan upwards there were a number of villages.

We passed no less mighty a personage than the man who "holds the spuit" of the chief of Luang Prabang. This fellow was sharp witted, and held an enviable position, for the old chief would never dream of undertaking anything without consulting him. When called to attend to his spuit duties he prepared for a glorious spree, asking for home brewed arrack *ad libitum* and ordering the slaughter of a buffalo. After a substantial meal, washed down with many draughts of good rice-liquor, he worked himself into a frenzy, and performed all sorts of contortions of the body, sometimes foaming at the mouth with his exertions. He was then considered as possessed; questions were put, his answers to which were regarded as oracular, and this questioning was kept up until the possessed fell asleep from exhaustion and inebriation. Strangers have always been anxiously excluded from witnessing these performances, and the custom seems to have pretty well died out, but still every one who can afford it has his spuit man.

I was short of boatmen, and, as the spuitman man could steer I took him with me. He warned me that he was the devil, but this information was of little consequence. He steered my boat in fast-rate style, and at nightfall on May 29 we reached Luang Prabang. Our journey had been a remarkably rapid one, for we arrived on the

evening of the fourteenth day from Nawng Kai. Had we been on the river a month earlier, we should have encountered greater difficulties. The river had risen, affording byways for the boats, where otherwise nasty parts of the rapids would have had to be faced.



A Me Kawnng Rapid low water season

CHAPTER XIV.

LUANG PRABANG CITY

To our great horror, the camp had been pitched in as bad a place as possible, and its arrangement was precisely the opposite of that which we had directed. The rains, however, had set in, and such heavy requisitions had been made on the inhabitants in the building of the dreadful huts, that we felt it would be impracticable to begin all over again.

It was reported that the Haw were at Muang Yiw, so we could not return to Bangkok, as a move in that direction would have made them imagine we were afraid, and would certainly have invited attack on Luang Prabang. We had to do the best we could, and as nothing could save the men from fever, we had a site at once selected for a hospital, and the building begun.

Pia Sokotai was to have protected Muang Yiw, and he had built stockades for that purpose; but before the Haw made their appearance he was attacked by fever, and came down to Luang Prabang, whereupon the Haw burnt his stockades.

Some members of the *Snabodi*, or council, put in an appearance and asked that a day might be fixed for my visit to the chief.

The official letter, or *supa aksawn*, was laid on a silver plate and carried under a white umbrell, preceded by fifes and drums to the chief's house, the road to which was narrow, and at that season smelt very strongly. We passed through the principal market place, which had small sheds on each side for the display of goods. It being noon the market was deserted, and we picked our way as best we could through the slush.

When we arrived the principal Lao officials were assembled in uniform, and in a little while the chief himself came. He was a fine old man, seventy seven years of age, of a very gentle disposition, and much beloved by the people. I had read that Luang Prabang was

once tributary to Anum, and on my asking the old chief if such was the case, his answer was short and decisive "Never." He said that Anum belonged to China, and that Luang Prabang had formerly paid tribute to China every ten years, the tribute having been taken from Muang Sai to Muang Li of the Sib Sawng Pana to the Governor of Yunnan, whom they called Chao Fa Wong. The tribute had consisted of 4 elephants, 1 mule 533 lbs of nok (metal composed of



MARKET PLACE LUANG PRABANG, 1885

gold and copper), 25 lbs of rhinoceros' horns, 1000 lbs of ivory, 250 pieces of home spun cloth, 1 horn, 150 bundles ofacca-palm nuts, 50 cocoanuts, and 33 bags of the rice of the fish *pla buh*.

While we were enjoying a pleasant conversation with the old chief, a concert of bull frogs was kept up under the house.

The market place of Luang Prabang was rather crowded in the mornings and it was interesting to stroll through the strange medley of men and women bartering and chaffering in their different jargons.

Rupees were not exclusively used as money, but were melted

down, and entered largely into the manufacture of the numerous articles executed in handsome designs by the Lao. These comprised cylindrical boxes, basins, *mah* sets (for the usual betel and areca nut) and handles for daggers and knives



CHIEF OF LUANG PRABANG

There were more than twenty Burmans resident in Luang Prabang, and their headman had been ~~over~~ twenty years settled in the town. They carried on a trade with Maulmein in gum-benjamin, raw silk, indigo, wax, and cardamoms.

Raw silk, of excellent quality, was once plentiful all over the province. Improvement was required chiefly in the winding of the

silk from the cocoons, as the method adopted produced coarse and knotted threads. The following is a list of prices of some of the produce :

One *hap* equals the weight of 2400 Mexican dollars, or 133½ lbs avoirdupois

Gum beniam, first quality, per hap	Rs. 200
Gum beniam, second quality, per hap	Rs. 100
Silk (nai yawt) first quality	Rs. 500
Silk (nai jo) second quality	Rs. 250
Wax	Rs. 200, or 133½ lbs
Cuteh	Rs. 10
Cudamons	Rs. 20
Klet Lin	Rs. 100

This last consists of the scales of the scaly ant eater (the amadillo), which are much used by Chinese and Lao for medicine.

The great difficulty is transport. The easiest route is by boat to Pak lai, the cost being Rs. 20 for 6000 lbs of produce, and thence by elephants and bullocks to Utamadit. It is the second part of the journey which is expensive. If as much care were taken of the elephants as is taken of their Indian brothers, and similar pads were used, each animal could carry 1000 to 2000 lbs, as it is, 300 lbs is a heavy load, and the transport takes from six to eight days. Each elephant costs Rs. 12 for the trip, but at one time the rates were according to weight.

Besides the products already enumerated, ebony, in large quantities, is found in the forests, also indigo and three kinds of cinnamon, *ke lau*, *le mu*, and *le nang*. The best quality of cinnamon, *le nang*, sells for half its weight in silver, and is much used in medicine. There is also trade in rhinoceros' horns, used for medicine, in ivory, and in cotton, which was once plentiful but is not now cultivated in any great quantity. It was sold at the rate of ten *pong* for a quarter of a tical. At one time tea was brought down in large quantities from the tea gardens of I Bang and I Wu, as the source of the Nam U. The common quality was very black, but for the use of the chief rectangular blocks, 6 inches by 4, and of a light colour, were provided. The stamp, in Chinese characters, signified that the tea was prepared for Peking.

The people of Luang Prabang have a decimal system of weights :

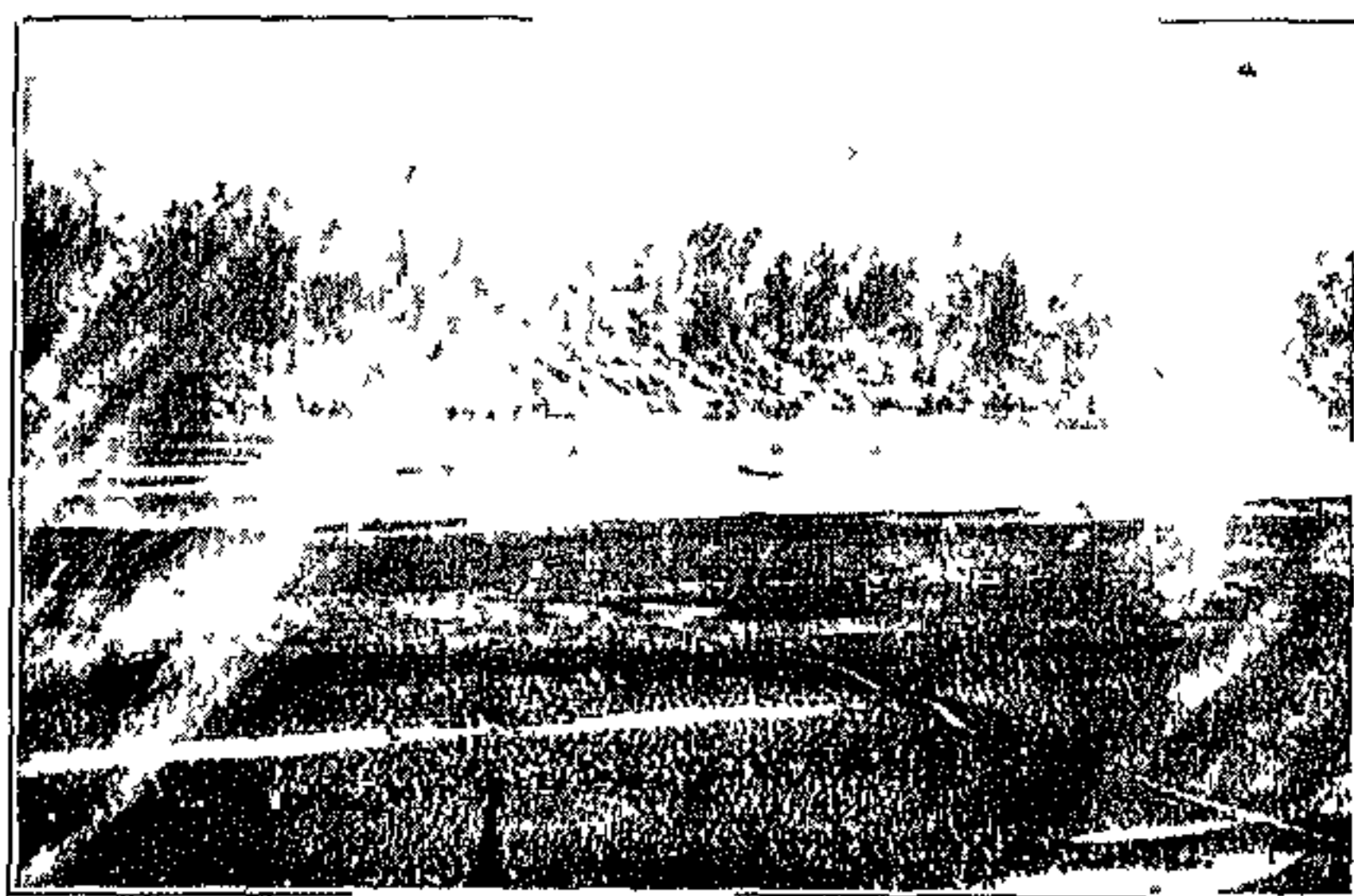
10 fin	1 te
10 te	1 hong
10 hong	1 khu n oi pong.
(One hong weighs 3 ¹ rupees)	
10 pong	1 iawi (100)
10 iawi	1 pu m (1000).



LUANG PRABANG MARKLI ITAGI ILFOIL DE'S ROYLD BY HAW

The month of June in Luang Prabang is a very busy one for fishermen. Nearly all the boats are employed on fishing, each paying a large fish for the privilege. Two kinds of large fish, *pla buk* and *pla verm*, are principally sought after. The latter, the smaller of the

two, of an average weight of 70 lbs, has teeth, and on the back a peculiar long fin, it has no scales, is of a dark grey colour, and not very appetizing in appearance. It is plentiful in March, April, and May, and is sold for about three rupees. A *pla bul* that I helped to take weighed 130 lbs, it was 7 feet long and 4 feet 2 inches round the body, the tail measured 1 foot 9 inches. The fish had neither scales nor teeth, and was sold for ten rupees. The roe of this fish is considered a great delicacy. The fish is taken in the sixth, seventh, or eighth month, or June, July, and August, when on its upward journey. Returning in November, it keeps low in the river, and a few stray ones only are caught. It confines itself to the Nam



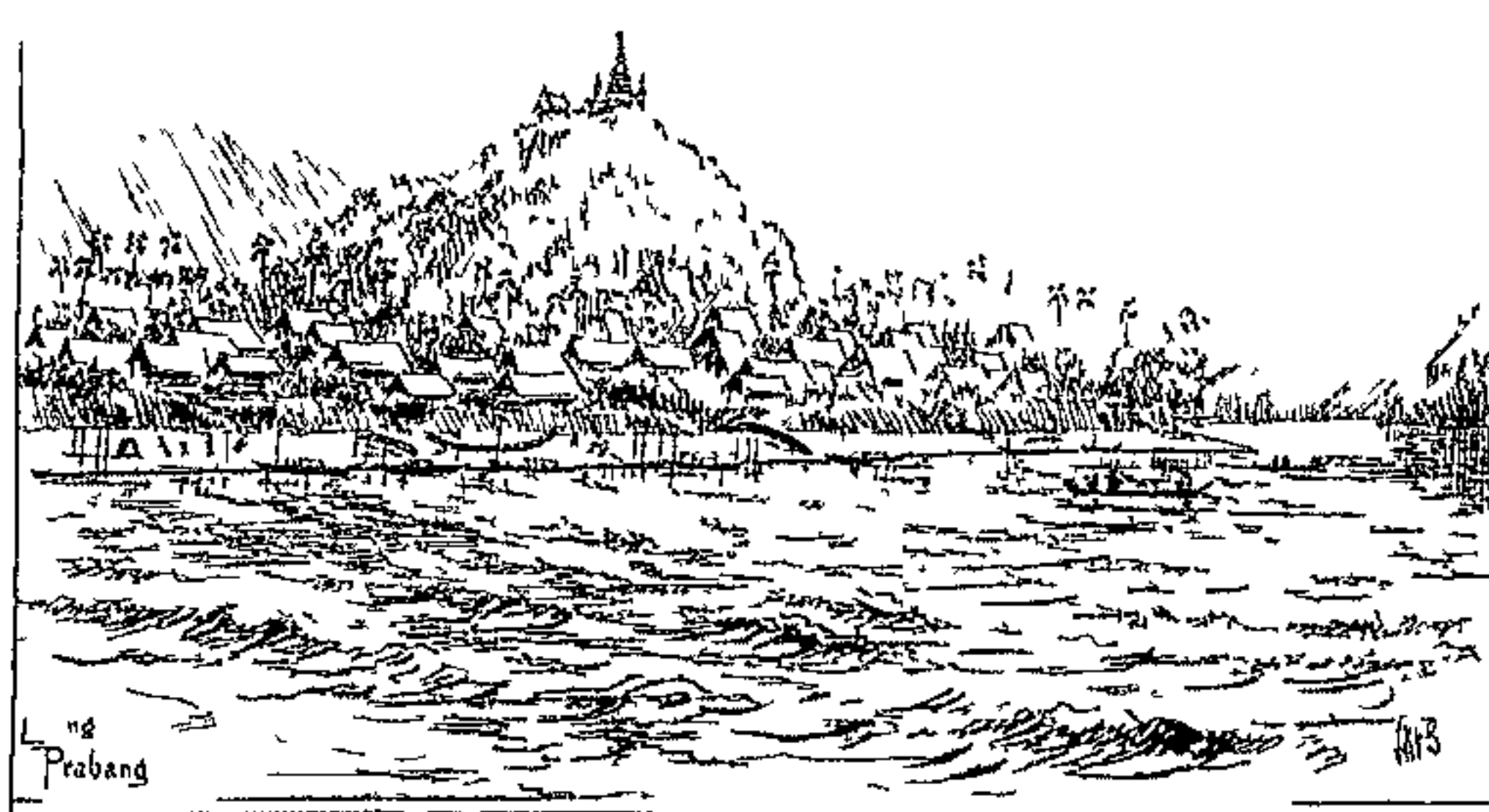
THE MI KAWNG AT LUANG LABANG

Kawng, and does not go up the Nam U, which the *pla term* seems to prefer.

The net for catching these fish is from 150 to 200 feet long and 6 feet wide, made of cord one eighth of an inch thick. This is dropped across the river from a small boat, usually by two men, and is supported at one edge by calabashes, used as floats, 8 feet apart, the other edge being sunk by stones placed opposite the floats. In June the water is almost red, and the fish, keeping near the surface are easily caught. The more they struggle the more firmly are they secured in the meshes, and the stones rattling against the side of the boat as the fishermen pull in the net, indicate a successful cast. This method of fishing is not without danger, for men have been known

to be dragged from the boat and entangled in the meshes of the net with the fish

Those who take an interest in sea serpents will be pleased to know that the Lao have a river serpent in the Me Nam Kawng. It lives only at the rapids, and my informant said he had seen it. It is 33 feet long and 20 inches thick. When a man is drowned it snaps off the tuft of hair on the head, extracts the teeth, and sucks the blood; and when a body is found thus disfigured, it is known that the man has fallen a victim to the nguak, or river serpent, at Luang Prabang.



CHAPTER XV.

TRADITIONS OF LUANG PRABANG

WE visited the hill where stands the pagoda called *Pia Chawn Si*, said to contain Gautama's bones. The pagoda is an elegant structure, heavily gilt, built on an isolated limestone crag about 230 feet high, round the base of which lies the town, or rather large village. On the western slope there was a steep flight of steps leading to the top where a watchman was stationed whose duty it was to strike a big drum at proper intervals if he failed in this the spirits would be very angry.

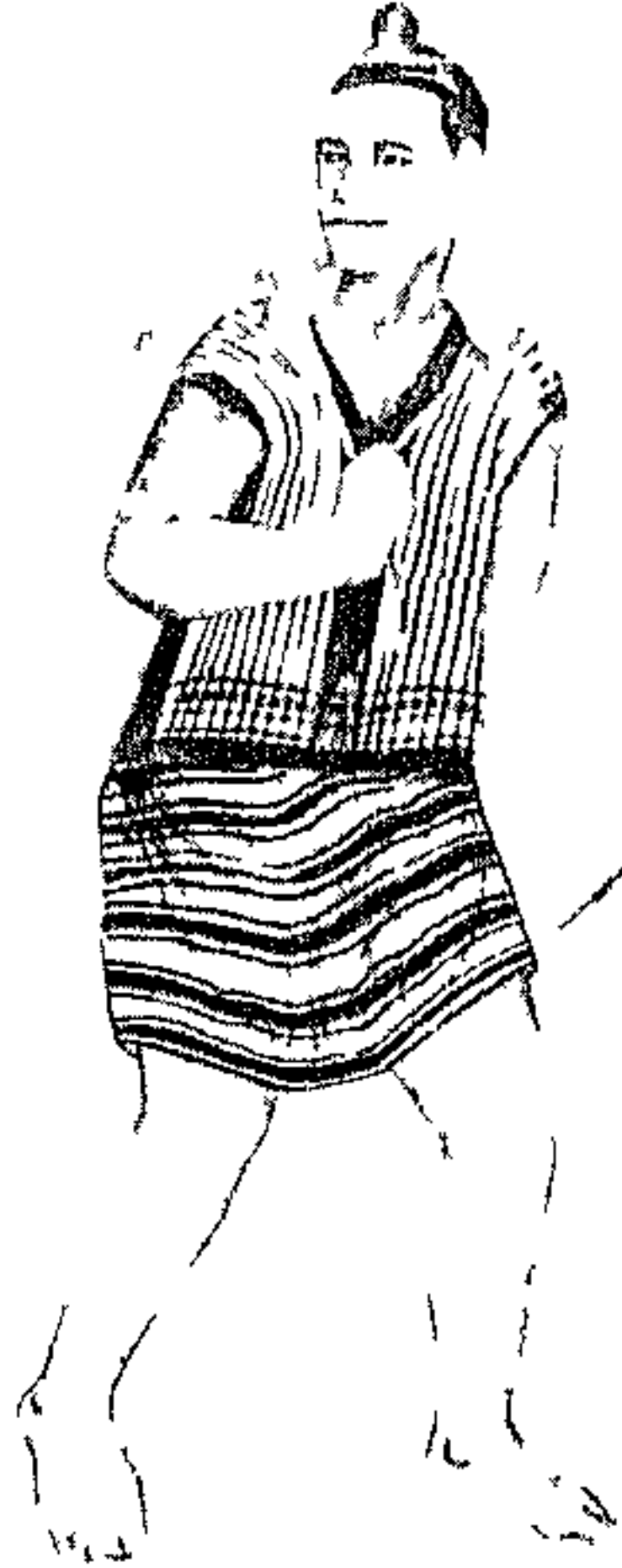
The entire population of the *Me Kawn* valley is strangely addicted to the worship of spirits, not good, but malevolent spirits, to whom every year cattle are slaughtered as propitiatory offerings.

Luang Prabang presents a beautiful view, especially in the evening, when the golden hues of the setting sun light up the mountains. The river, 1770 feet wide and perfectly still, may be seen for long distances, and the hills, sloping down to the banks, seem to enclose the broad waters, which thus assumed the appearance of a lake. The charm of the landscape is heightened by a pagoda here and there, some with domes, said to be very ancient, one of them alleged to have been built over a lime and a guava tree that could speak. *Wat Pa Fang* is said to have been built in the year 300, which in the *Chula* era would be the year 938 A.D., and this temple is the oldest known.

At *Wat Luang* religious rites were annually performed and festivities were held, in which the *Kamu* played a very important part. Here, also took place the ceremonies in connection with the accession of a new chief, where the headmen of the *Kamus* assembled and took the oath of allegiance, swearing to die before the chief, shot arrows over the throne to show how they would fight any of its enemies, and holding a lighted candle, prayed that their bodies might

be run through with hot iron and that the sky might fall and crush them if they proved unfaithful to their oaths.

On the right bank of the river is a small hill called *Naig Meri*. A legend says that a lady of this name when she died was changed into the hill, the outline of a woman in a reclining posture being faintly discernible in the evening twilight. On the left bank is the impression of a foot said to be her right foot, and a corresponding

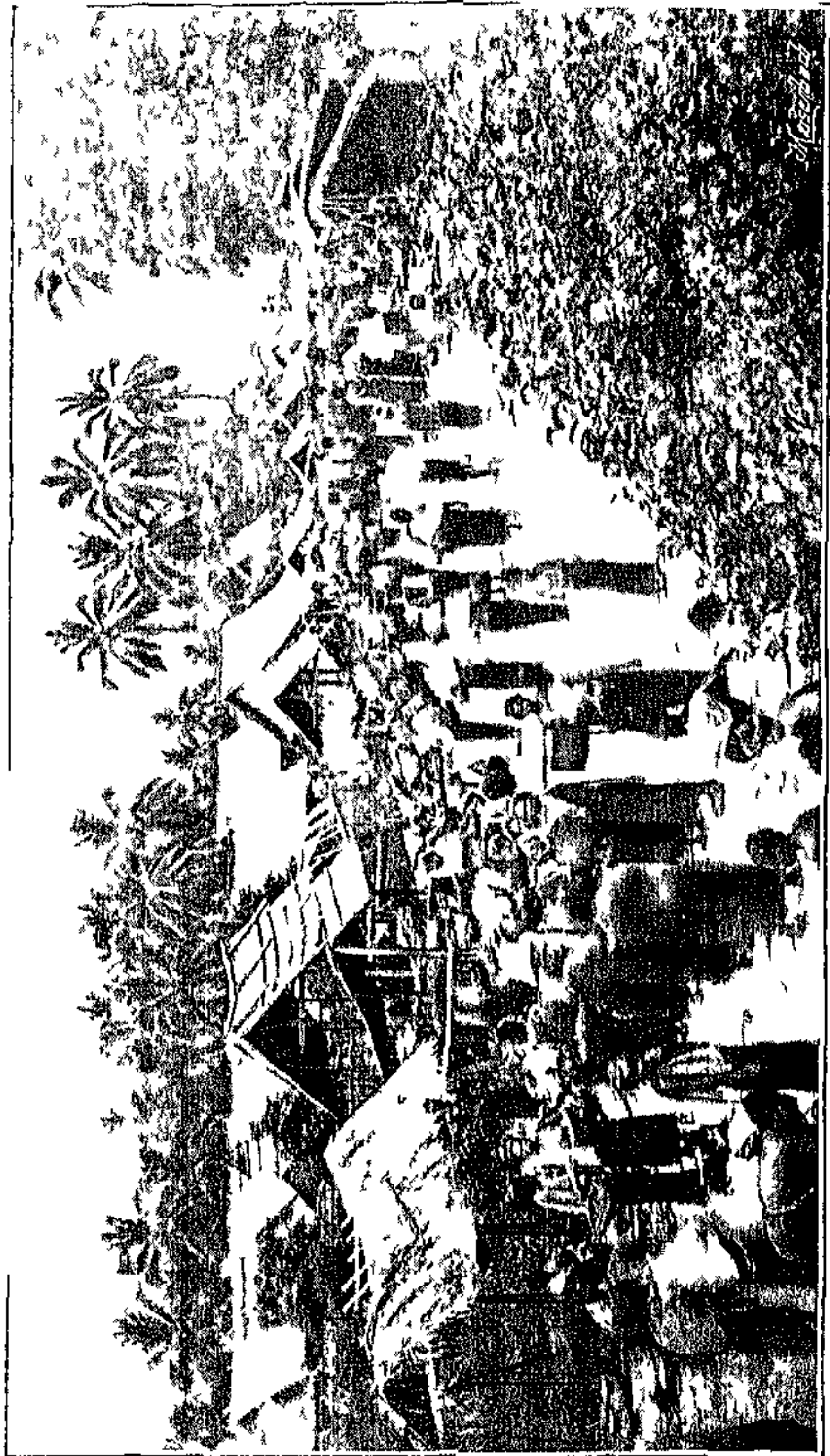


KA, OR KAMUK MAN NORTHERN SIAM

mark is shown on the other side of the river, indicating that her last step measured 1000 yards.

To the east is the hill called *Pu Suang* at the foot of which died the lonely scientific traveller, Charles Mouhot, whose memory is still cherished with kindly interest in the neighbourhood. His death, however, is associated with the superstition of the Lao, for they say that on the hilltop there is a great treasure, guarded by dragons which, even in our time, have been seen rising and struggling together in the air, and that whoever tries to ascend the hill is certain to perish in the attempt. Mouhot made the attempt, contracted fever,

and died, but it is needless to say many have reached the summit without meeting with death dragons or treasure



MARKET PLACE, LUANG PRABANG

Luang Prabang, one of the oldest towns of Indo China, has, very probably, the most interesting history I was able, at odd intervals,

to gather the following traditional scraps from the eldest son of the chief:

The first king was K'un Borom, who lived at Teng (identified by Major Genin as the Dasana or Doana of Ptolemy), where a tree grew that reached to heaven, and shaded the whole district of Luang Prabang. The king used to amuse himself by going up and down between earth and heaven until the evil spirits, wishing to keep him on earth, cut down the tree. The wood of the tree is found even nowadays, and, under the name of 'Kua Kao Kat,' is, of course, used as a charm against every evil. The king planted pumpkins, in 1



KA O L

one day, to see whether a pumpkin was ripe, pierced it with an iron spear, whereupon, to his surprise, blood flowed from it. He waited a few days and then pierced another when a black man issued forth who became the progenitor of all the Ka Che, or Kamu. A few days later he pierced another pumpkin, when a white man came out, who became the progenitor of the Lao. In accordance with the tale the Lao look upon the Ka Che as their elder brethren.

As time went on both the Lao and Ka Che grew very numerous so that it became necessary to find a new country, and rivalry sprang up between the families, though the younger brother's family, or the Lao, were admitted to be the cleverer. On the occasion of the exodus from Muang Teng the Lao, with their usual skill, used wooden boats

and rafts, whereas the Ka Che made boats of buffalo hide. Both went down the Na n Nua but at a rapid called Men Kwa ("Smell of Buffalo") the Ka Che boats were broken and had to be abandoned. Thus the Ka Che were obliged to seek a helping hand from the Lao, who took them to the spot where the town of Luang Prabang now stands. There they founded a city called Sawa which grew to be very powerful, and held sway over the whole Me Kwang valley. The city was named after a large stone over which the pagoda Wat Chieng Tawng has been built.

History omits the story of the pumpkins and says those who came first to Muang Sawa were the descendants of K'un Law, the eldest



THE ME KAWNG AT LUANG PRABANG

son of K'un Borom, by his wife Nang Pola. The second son was Chet Chieng, who founded Chieng Kwang, or Puan; the third son was Ti Palan, who founded Laksa Kuha, or Yunnan.

The second wife had four sons: Chu Song, who founded Pa-Kung, or Anam; Lak-Kong who founded Hongswadi (Pegu); Lai Pong who founded Chieng Dao, or Aleva (Chieng Tung, Siamese "Itung," the Lao having no R), K'un In, the youngest, who founded Si Ayutthia. Thus Muang Tong is regarded as the distributing centre of all the population of Indo China.

To settle the long-standing dispute concerning supremacy between the Ka Che and the Lao, it was agreed that the mastery should be given to those who should make the highest *chaleo*, or small matting placed conspicuously to frighten spirits and tigers from the camp. The Ka Che set to work, but could not raise their *chaleo* to any

considerable elevation. The Lao, tying themselves to the end of a bamboo, which when let go sprang up to a great height, easily became the masters, and, until quite recently, the Ka Che consequently supplied them with all that they required. In the old days a rupee purchased more rice than four men could lift.

For fifteen generations the chiefs had the title Kun, and for six generations the title of Lao. The name of the city was changed to Lan Sang (Siamese "Chang," the Lao having no *ch*), the meaning of the name, according to Pia Riddhmon, the Siamese commissioner, being, 'the plain among the elephants,' as the surrounding hills are called *Sang* (Siamese "Chang"), or elephants. Then the name was changed to Luang Prabang, from the Prabang, a golden image of Gautama which, first set up in Ceylon, was carried successively to Cambodia, Luang Prabang, Wieng Chan, Bangkok, and finally back to Luang Prabang.

In the beginning of this century Luang Prabang was destroyed by Wieng Chan, from which it had long been separated. Its chief, Anurata, and his son, being taken prisoners, were sent to Bangkok, where they remained for twelve years. Dying twenty years later, this chief was succeeded by Mongta, who ruled for twelve years, and was followed by Chao Luang Seim, who, in turn, after nineteen years of government, was succeeded in 1870 by the late chief, Chao Luang Un Kham.



BUDDHA

CHAPTER XVI

SICKNESS IN THE RAINS WITHDRAWAL TO BANGKOK THE UTHARADITH
ROUTE.

As our work could not be carried on during the rains, Leonowens returned to Bangkok. Bush, as he wished, remained, and I sent seventy soldiers down to Nawng Kai, a comparatively healthy place, to be at the disposal of Pia Lai the general who was marching to dislodge the Haw He, however, showed his opinion of the men given to us for soldiers by dispatching them back to Bangkok as soon as the rainy season was over.

The rain poured down steadily, and sickness prevailed. I was bowled over with fever, and all my servants were ill. Bush, who had been complaining off and on, seemed to be getting worse, and I had him accommodated in my bedroom, so as to be able to look after him better.

On the evening of June 29 he had a violent attack of fever, and sank rapidly. By half past eleven all was still. Tired and ill, I could not think that my companion, only twenty-one years of age, was dead, but, to my grief, it was only too true.

His death was a great blow to me, but I found a friend in the person of the Governor of Pichai, than whom no man could have been more kind and considerate. He did everything in his power to arrange for the proper interment of my friend, whose remains, duly coffined, we placed in the grave dug near Wat Tat. Miserable and ill, I saw no good in staying. I could drag along, but should not be in a fit condition for the heavy work after the rains, and it seemed better to return to Bangkok and prepare for the next season.

On July 5, taking leave of the kind old chief, who had provided me with comfortable boats, I turned my back on Luang Prabang. It was a pretty place, but during the rainy season decidedly unhealthy.

for old residents and strangers alike. There was no drainage whatever and after a shower the effluvia were so heavy that one fancied them settling like a fog. The fevers contracted are not of the ordinary type; violent retching comes on and the patients sink and die. In some cases in less than twelve hours the disease has done its work. It was not uncommon for a man to be perfectly healthy in the evening, seized by a fever during the night, and a corpse next morning. Some go perfectly mad. The Chinese seemed to have a great dread of the place during the rainy season: not a single Chinaman would remain. The traders came from Nawng Kai and Pichai during the dry season, but were off before the rainy season.

The journey down stream was very quick, and I reached Pak lai in the forenoon of the third day. The river was not recognizable, the whirlpools were apparently dangerous, but the boatmen were wonderfully expert.

We started from Pak lai with the sick. The march, although short, was too much for them, and we halted for a day at Muang Wa. The path to the pass over the main watershed was very easy and comfortable, but the western side as far as the camp on the Nam Pat was roughish, and very trying for the sick. I pushed on to Yandu, the nearest village on the Me Nam, in order to get to the boats as soon as possible. One, unfortunately, died, but the rest reached Yandu safely. The sight of the Bangkok river gladdened the poor fellows' hearts, and the boats in which we descended, small though they were, proved a comfortable change for every one.

We reached Utaradit, which consists of a long stretch of houses on the right bank of the river, with a large Chinese population. It is divided into three parts: the northern, Pa It, the Middle Utaradit, where the governor lives, and Ban Po, the Chinese division, as I may call it. It is a great trading centre for Lao and Yunnan produce, which is here collected for transit to Bangkok and other places. Transport arrangements, however, are very defective. Strangers are unable to secure the boats necessary for the downward passage, and the difficulties of the return journey are still more serious, so that traders prefer to strike westwards overland. Thus it happens that produce valued at many thousands sterling is annually taken to Maulmein instead of to Bangkok.

To the west of Utaradit is the shrine of Pra Ten, of modest dimensions, of the usual Siamese style of architecture, and heavily

gilt. The doors said to be very ancient, are large and magnificently carved. The cataloque built over the rock is we were told about 12 feet long 6 feet broad, and 2 feet high, richly gilt. In the centre is a hole about 6 inches in diameter, through which the people pour their offerings of gold leaf. Around there are countless images of Gautama, with wax tapers burning in front of them at which occasionally the devotees light their cigarettes, with, to a stranger, a rather comical effect. While one man is devoutly attending to his tapers, another, with cigarette ready, is intently watching his opportunity, and suddenly jerking down, holds his cigarette at the light, but this is so usual that no one notices it. There are a number of priests, some of whom drive a good trade with their nostrums for all sickness and charms against all evils.

From Utaradit there are trade routes to P'ie, Sawankalok (the ancient Sajanalai), and Sukotai. The story of this last place is interesting, and is told as follows:—

Chao Abhaya-Gamani, the King of Sukotai, became a hermit, and lived on Kao Luang towards the west. The grand-daughter of P'ia Nak, the king of serpents, came from the ground, and having changed herself into a beautiful woman, abode with the hermit king for a week.

When they parted, the king gave her a ring and a silk turban as tokens, and arranged that on a certain day he should come with all the women of Sukotai and take her in procession to his capital. When the day arrived he came as he had promised, but there was no beautiful princess, and he returned in anger to his home. The time reckoning of serpents and of men differed by a day, and when the woman, arriving with her child according to the agreement as she understood it, found neither king nor retinue, she in turn became indignant. Lamenting her misplaced confidence in her royal lover, and placing her child and the tokens in the hermit cell, she resumed the form of a serpent.

Within the forest were two hunters, who, overtaken with thirst, bethought them of the cell, arguing that had there been no water there it could not have been the dwelling of the hermit-king. They approached the spot, and finding, to their surprise, the child with the ring and the turban, they took the defenceless infant under their care. This, according to the tale, was in the year 1240 of the Buddhist era, or 697 A.D.

When the child was ten years of age he accompanied the hunters

to witness a ceremony connected with the raising of the top of the royal palace. The youthful spectator pointed out that the top was leaning over, and was about to fall in a particular direction. The accuracy of his observation was verified by the collapse of the structure, and when the incident was reported to the king he commanded that the hunters and the boy should be brought into his presence. When he had heard the hunters' story he recognized the boy as his child, and gave him the name Arun Rijakumar. At this time Sukotai, though a powerful state, was tributary to P'ia Chao Kambuja, King of Inthap'at (Cambodia), but now, on the advice of the young prince, the king renounced his allegiance. To seize the instigator of this revolt the King of Cambodia sent a sacred man, Khom Dam Din, who could dive through the earth. The prince, then about thirteen years of age, was in the monastery sweeping the grounds when the Khom suddenly made his appearance, inquiring for his intended victim. The prince, however, at once transformed him into a block of stone, the remains of which are still to be seen, but are constantly diminishing, being carried off by the inhabitants piece meal to serve as charms against all evil.* The prince, growing up to manhood, married the daughter of P'ia Ba Tamarat, King of Sajanalai.

The King of Sajanalai, accompanied by his brother, P'ia Kidhi Kumai, then went in a thirty oared boat to the land of the Chinese, where their presence brought about an eclipse of the sun. The Emperor of China sent to inquire the cause of the darkness, and K'un Keo Amat reported the arrival of two Siamese princes. This seemed in accordance with a prophecy which now came to mind, and which was completely fulfilled when the emperor bestowed his daughter to be the wife of the King of Sawankalok, presenting him with half his seal of state and sending a thousand men to escort the princess to her new abode. The attendants, settling in Tao Tuan, above Muang Kao (old city) in the Sawankalok district, where there are fields of kaolin, carried on the manufacture of pottery, as did their descendants after them, until, owing to the Burmese incursions, the art was lost. The brother, P'ia Kidhikumar, married Nang Malika, a daughter of the King of Chieng Mai.

We pushed on to Pichai, where I met with the greatest possi-

* Major Gerini investigated what remained of this stone and found it to be a torso of an old statue.

kindness from Pia Utarakan, the governor, a relative of my friend at Luang Prabang. He very kindly made room for me in his house, and I was very soon settled. There we had the Siamese music, which I have always liked, the music of the bells reminding me, somehow, of the sound of a cascade. It is strange to hear "Yankee Doodle" and 'Wait for the Waggon' rendered on Siamese instruments.

The river had overflowed its banks and a number of people, the majority being women, had assembled in their boats for races. A special feature of these races is that the boats' crews are either all men or all women never mixed. The women are young and marriageable, and, in fact have only come for a grand flirtation. They challenge a boat of men for a race. In the boats there are more priests than laymen, in some cases priests only, and in view of the celibacy of the priesthood the circumstances tend to scandal.

Pia Utarakan told me of great floods that had occurred a few years before, when the water ran red, and the fish were poisoned by a plant called by the Lao "idam" which only grows in the Lao country. Two kinds of fish, called *pla mau* and *pla chom*, escaped, being able apparently, to leave the river and take trips across country.

The Lao have recourse to the ordeal by water, in illustration of which Pia Utarakan told of a case that happened to a hunter. He had shot a deer, and had tracked it by the blood to a river. There he met a man with the deer at his feet and his spear through the hole caused by the bullet. Each claimed the deer, the spearman asking the rifleman to show the marks of his bullet. A petty magistrate came on the scene, and decided they should go through the water trial. One had his face up stream and the other down. At a signal both went under water, and the spearman, rising immediately and offering the magistrate a bribe, which was accepted went down again. Then the rifleman appeared, offered a bribe, and was allowed to go down again. The spearman immediately hobbled up, and was hurried off as he was, out of sight. The rifleman, rising again was accused of being the cause of the other man's death, upon the pretence that he had not yet come up. The rifleman was glad to make off as he was, and the magistrate collected his fees in the shape of the men's clothing, spear, gun ammunition, and deer.

In the annual speech from the throne his Majesty, referring to our work, was pleased to say, 'The expedition has during a few months' work succeeded so far to our entire satisfaction; but, to our

deep regret when the rainy season set in the expedition suffered severely from sickness, so much so that few men in the force entirely escaped, and we lost a most promising young European officer, and were compelled to recall the expedition. The surveying expedition will again proceed, on the approach of the dry season, to resume the work originally held in view, much of which is yet unfinished, and it will return to the capital before the setting in of the rainy season.'



BUDDHA

CHAPTER XVII

MARCH THROUGH MUANG NAN

At the last moment Leonowens gave up the idea of returning to Luang Prabang. Mr E. J. Collins, an old schoolfellow whom I had not seen for twelve years, joined me from the Indian survey to help in my work in Siam.

An escort of thirty marines accompanied us, and Lieutenant Ross mussen, of the Danish artillery, was in charge. I was instructed 'to consult with the two military commanders, P'ia Rajawananakul and P'ia Picha', who had been desired to take vigorous steps for the suppression of the Haw, 'to look after the safety of the survey party, and to render every assistance.

Starting from Bangkok on November 12, 1884, we passed Charnat, the teak revenue station, and then a curious bend in the river, with a number of small hills on the left bank, beyond which the Me Nam bifurcates.

After a straight run, with low hills on the eastern flank, Nakawn Sawan (the "City of Heaven") was reached.

We accomplished the journey thither in comfort and ease, and passed on to Paknam Po, at the junction of the two streams, which, after receiving all the waters of the northern part of Siam, commonly called Lao, form the Me Nam Chao P'ia. The varieties of boats used on the river are remarkable, and some are peculiar to different rivers. The Kwe Yai (main branch) from Nan is narrow and deep, the Kwe Noi (minor branch) from Chiengmai is shallow and wide, in some places, as at Rabong, 800 yards in width.

We pushed on to Utaadit, where we left the boats and took the land route to Nan by Muang Fek.

Some of the transport elephants having run away, I was delayed, and had to make up for the detention the next day by walking to

At Hm, a march of more than eleven hours. The latter part of the journey was lighted by excellent torches made by splitting the ends of dry bamboos, growing along the sides of the path.



I'IA PICHAI, WHO DIED AT LUANG PRABANG

The march onwards to Nan was over interesting country, through numerous paddy fields that had been well irrigated.

Nan is the most flourishing town of all the Lao Pung Dam division. The people are well to do under their old chief, who has ruled justly and firmly for upwards of sixty years. He is descended

from the man who led the Burmese army on its way from Lu to Nan into an ambush, where it was slaughtered in the stream now called Sam Pan. He was about fourteen years of age when he fled with his father, a refugee, before the Burmese army to Sawankalok about 1815 A.D. Several of the 80 is hold important posts in the administration and none who break the laws escape punishment.

Three years before my visit there had been great floods. After heavy rains lakes had formed in the Nam Yao and Nam Yang, tributaries of the Nan. The banks burst, Muangs Uen, Yang, and Yom were totally destroyed, and a great number of lives were lost. The walls of the city of Nan, about 2 miles in circumference, were damaged, but promptly repaired.

The rice fields are cultivated to their full extent, there being an excellent system of irrigation, which is not allowed to fall into decay. Advantage was taken of a large swamp, and by piling earth in a circle a reservoir was formed, which supplies hundreds of acres of rice fields, the soil being particularly productive. According to a simple calculation, the number of men and women who annually contribute rice to the common store in the city is 60,000. The population of the whole province I would estimate at 250,000, of whom 50,000 are in the portion of Nan beyond the Me Kawng. Thousands of emigrants from Sibsawng Pana, and Kamus from Luang Prabang have settled in the province, and there is a growing population of Meo and Yao. Nan was justly governed, and crime was punished in a manner which, if drastic, was effective. Theft was punished by decapitation, a severity which was supported by the belief that nearly all robberies are accompanied or followed by murder, and that, though possibly in ten years one man may lose his life for theft alone, any relaxation of the law would be followed by a far greater loss of life.

Near the source of the Nam Nan, and in the vicinity of the main watershed, are several salt wells, from which an excellent supply of salt is obtained. These wells are jealously guarded, and the fears of the people are excited by stories of the punishments inflicted by the spirits on those using them wrongfully. Certain people have the privilege of working them, paying one rupee for four *muns*, about 530 lbs. The wells are from 30 to 40 feet deep, and it was said that three buckets of water produced one and a half of salt. In the rainy season they are constantly worked, but in the dry season they

run dry, and work ceases. There is nothing to show how the presence of salt was discovered or what suggested the sinking of the wells; the people say they are very ancient. The teak forests of this region are the finest in Siam. The existence of gems is reported from various quarters, and when the geological examination of the district takes place it will be found rich in minerals.

Collins and Rossmussen took the land route by Muang Hung to Luang Prabang, while I went by the northern and quicker route to Tanun on the Nam Kawn.



VIEW OF CRATER

In route we passed through Muang Luak (since called Hong Sawadi), which is a plain about 10 miles long and 6 miles broad, surrounded by high steep hills. Rising a couple of hundred feet above the plain are two active volcanoes, known as the 'Great Fire hill' (Pu Fai Yai), and "Small Fire hill" (Pu Fai Noi).

I visited Pu Fai Yai, and found a path to the top. The crater is about 100 yards long, 50 yards broad, oval in shape, with one end about 50 feet higher than the other, like an oblique section of a

erone. It had the appearance of extensive excavations. From the different heaps smoke was issuing, and on some there were very offensive vapours. If dried sticks were inserted into some of the issues there was a low rumbling noise as of a bellows playing, and immediately they burst into flame. In others the volumes of smoke increased, but there was no flame or accompanying noise. As the day advances the mists rise, and while the sun shines there is less smoke, but the flames are constantly playing, and there is the same



INTERNAL VIEW OF VOLCANO TU LAI YAI

rumbling noise. The people are afraid of the volcano and attribute it to very bad spirits. Some of the minerals at the volcano are sulphur and travertine, also kiesel (clay iron ore, plentiful all over Siam)—when hot it is soft, and can be pulverized between the fingers—sulphate of alumina and potassa, native alum, hydrated peroxide of iron, limonite, native sulphur.

Arrived at Tanun, we took to boats and had a pleasant passage down the river, shooting at peacocks, which were plentiful. On one occasion a peacock was seen tumbling on a sandbank in a most

extraordinary manner. The boatmen said it was attacked by a small hawk, which fastened under its wing. Thinking that it would be so intent on its savage purposes that we could make an easy capture, we pulled up, but on our approach the hawk flew off, and the peacock managed to scuttle into the jungle. The boatmen said the peacock would not escape, as the hawk, which was not twice the size of an ordinary house sparrow, would return to the attack, actually feeding on the living bird, and repeating its meal at intervals.

We visited the cave opposite the mouth of the Nam U t c ison to which was made easy by a flight of steps. It was not very large, but contained from one to two hundred images, varying from 3 inches to as many feet. A beautiful little jagoda built with a looked charming in the glorious sunlight.



A Nam U V 190

CHAPTER XVIII

OPERATIONS AGAINST THE HAW.

WHEN we arrived at Luang Prabang Pia Pichai had already left with the Luang Prabang contingent for Tung Chieng Kam. I paid a visit to the old chief, who, though suffering from a slight attack of asthma, looked very well, and appointed his eldest son, the Chao Rajawong, to accompany me to Tung Chieng Kam.

Collins and Rossmussen brought the Nan elephants to Luang Prabang but the Nan officials refused to go further without an order from Bangkok. Knowing that the most urgent want was that of supplies, we loaded with rice as many elephants as could be got together, and set out, following the route which Pia Pichai had taken with his contingent. Every day my surprise increased at the light-hearted manner in which the transport of large numbers of men across a rough country was undertaken.

At Ban Le of Wieng Sen I received a note from Pia Pichai, requesting me not to come to Tung Chieng Kam, as provisions were short. Our transport coolies had run away, but I sent forward a supply of rice on the nine elephants we had brought. It was arranged that Pia Raj from Nawng Kai and Pia Pichai from Luang Prabang should reach Tung Chieng Kam on a fixed day, and in concert attack the stockade of the Haw, if the latter would not surrender.

Pia Raj had spent his youth in the precincts of the court, and was annoyed that he had been appointed to act in concert with Pia Pichai, who was a country-bred man. Besides, he had a thorough contempt for the Haw, and was quite persuaded that his mere presence would make them flee or surrender. Consequently he

took things in a rather leisurely way, and, like the great Napoleon depended on the enemy for supplies

P'ia Pichai was anxious to carry out his orders to the letter, so he hurried along a very rough route, over mountains and down rivers, with a large and scantily provisioned body of men and reached Tung



LIEUTENANT ROSSMUSSEN AND GUARD AT WAI JAN SIN.

Chieng Kam on the day appointed. Being utterly unaccustomed to command, he found himself at the head of an undisciplined rabble, and the Hlaw were irritated into assuming an attitude of resistance. He made a stockade, taking up a position about 2 miles from the Hlaw defences, and there he remained for more than a month, awaiting

the arrival of his worthy colleague, who was later to aid and assist himself by the way. Pia Raj in consequence of this appeared at Tung Cheng Kam, unfortunately ignorant with which "the country general" as he called his colleague. The "country general" had an unpleasant time, but he did all he could to bring matters to a successful issue. He placed himself unreservedly under Pia Raj who made a new stockade about 500 yards further on than the other. Pia Raj was fully persuaded that the mere knowledge of his arrival had been enough for the Haw, and that they had already deserted their stockade, his scouts having reported that there was not so much



SIAMIS VILLAGE

as the sound of a bowl to be heard there. He went out to make a reconnaissance in person, but when he got within rifle range a shower of bullets convinced him the place was not deserted, and he had to beat a hasty retreat. Then he formed his plans for attacking the Haw, and getting rid of them, as he said, in half an hour.

It was then that, with Collins and Rossmussen, I arrived at Tung Cheng Kam, having pushed on in consequence of a letter from Pia Pichai, requesting me to meet the two generals for a consultation about the work. Here the Haw had been carrying on their operations with their usual barbarity. At the bottom of the dark ravine were the corpses of two Lao that had recently been beheaded, and tales

of fresh cruelties were told. The Haw had sent out scouts to watch for messengers or stragglers from the camp, an unfortunate Khamu had been seized, his fingers and his ears cut off, and the mutilated victim sent back as a warning to those who were carrying supplies. The wife of this man was also taken, and, being *muamla*, she was



HAW STOCKADE AT TUNG CHIENG KAM, BESIEGED BY SIAMESE

killed, for it was believed that the blood of an unborn babe rendered the powder with which it was mixed unfailing in the destruction of life. Round ticals were also used as bullets, as they, too, were charmed to render them fatal.

On February 22 we reached the field of battle. The oracles were

consulted, and it was decided that ten o'clock in the morning was the right time to fire the first gun in the attack on the Haw. About eleven o'clock we found the men hard at work, and the cannonading was being vigorously carried on.

Moving to within three-quarters of a mile of the Haw stockade, Rossmussen and I had a fairly good view of the operations. The stockade, about 400 yards long and 200 broad, was surrounded by growing bamboos, which made it difficult to see into it. There were seven towers about 40 feet high, and the constant puffs of smoke seemed to show that the greatest execution was being done from them. North, west, and east were open rice fields, to the south was jungle. The Siamese had surrounded the stockade on the north and east by the Luang Prabang contingent and men from Pichai and Sukotai, and on the west and south by the contingent from Nawn-g Kai. The north and west sides were well in view, and it seemed that the assailants were advancing in columns of about 50 men, carrying several white elephant flags, each company being provided with an Armstrong six-pounder mountain howitzer. They seemed to be moving to take up their positions behind a temporary palisade already constructed by men who had advanced bearing shields of double rows of bamboos. These shields were very heavy, and the men carrying them were wounded in the arms and feet, which it was impossible to protect.

The cannonading went on busily on each side, but apparently a good deal of it was only noisy display. With the small arms, however, considerable execution was being done. The Siamese planted themselves within 100 yards of the stockade, and proceeded to make a palisade. Many men were retreating from the stockade in groups of twos and threes, some poor wounded fellows riding on ponies or being carried. They seemed indifferent to their wounds, and all appeared in excellent spirits.

About two in the afternoon each side ceased firing and there was a lull in the operations. About three the firing was resumed more vigorously, and a short time afterwards the news came that P'ia Raj was wounded. He had been struck by a shot, weighing about two pounds, which had glanced off one of the posts of a Chinese joss house, where he was standing, and struck him in the leg.

Evening came on and the stockade had not yet been taken, but the firing was kept up all night, and shouts of defiance from each side.

could be heard at a great distance. It was known the Haw were inveterate opium smokers, and if the firing was kept up, not being able to sleep, they would be fagged out. The Siamese loss for the day was serious, about fifteen men belonging to Pia Pichai's detachment being killed, and twenty wounded, while of Pia Raj's men not less than fifty had been killed and wounded.

The Siamese settled down to a regular siege, charges were made on the Haw stockade, but as one section did not act in concert with the other they were repulsed with heavy loss. The stockade of the Siamese was daily filling with wounded. Collins and Rossmussen performed the work of doctors, dressing the wounds of about forty men daily. Some of the wounds took hours to dress. Rossmussen had nerve for surgical operations: his method of extracting some of the bullets might have made a doctor stare, but it eventually gave the men relief.

One day, when all was quiet, Rossmussen and I went within 400 yards of the Haw stockade, and observed that the roofs of the towers were made of grass. Rossmussen, who was an artillery officer, immediately suggested to Pia Pichai, who had come to warn us to leave, that he should use heated shot, and thus set the towers on fire. The idea was adopted, but the details were to be carried out by the Siamese themselves.

Bamboo scaffoldings were erected opposite each tower, about 40 feet in height, that being the height of the towers, and the howitzers were hauled up to these platforms. The powder was rammed home with grass for wadding, a cylinder of wood was introduced, then the hot shot poured in and immediately fired off. So far well, the signal was given, Pia Pichai's gun at the north-east corner responded, and the tower was in flames in a moment. What were the other guns doing? I was told that one of the hot shot fell fizzing into the midst of a crowd of Siamese, who were quietly smoking at the foot of one of the scaffolds. The Haw were quick to see that these grass roofs were now a source of danger, so they promptly denuded the towers of all inflammable covering. The north east tower was, however, burnt.

Another plan was suggested. The men were to move up in parallel columns carrying firewood before them, so that the palisade of the stockade might be reached and the whole set ablaze. Some days were spent in collecting a great stock of firewood, but as soon as it was all heaped up in front of the first parallel, the Haw set it on fire,

and the Siamese had to fall back under a heavy shower of bullets, which killed many to the list—dead and wounded.

The Haw had a trick of making sorties at night, each man carrying in his hand a small canvas bag holding about two ounces of powder. These they would ignite and throw among the Siamese. The flash enabled them to see their victims, whom they would spear, and then creep back to the stockade. The Siamese would blaze away in the direction of the flashes, and thus often killed and wounded one another. A Haw was captured one night, but was already mortally wounded, and only lived one day.

Tigers were also giving trouble at this time. When there was most noise they made their appearance, and once they carried off two men. The condition of the Siamese troops was pitiable, at night, when I though well clothed and dry, shivered with cold, these poor people lay on the wet ground without any covering; their daily rations were only a few ounces of rice, in addition to whatever they could pick up in the forest, yet there was never a murmur heard or word of complaint. During the night they would straggle into the stockade in twos and threes, looking for something to eat. Sometimes they might be heard chaffing and calling out to one another to return to the Haw, the authors of all their troubles, showing as much indifference as if they had been deer-stalking.

The general, Pan Ra, was not much better off. Had he not been wounded, it is possible he would have taken the stockade with a rush, for he was plucky enough, and I think the men would have followed him, but he was totally incapacitated. The days were sometimes hot, and there was a plague of flies, and as he had no protection from the heat or flies, I gave him my tent. I tried to persuade him to raise the siege and fall back on Chiang Kwang, where he could make fresh arrangements for supplies. I represented to him that the Haw would certainly run away in his absence, and all he would have to do would be to take necessary precautions against their return. This proposal shocked him, for he thought the chance of capturing the Haw should not be lost. I told him, as things were, there was no possibility of capturing them, they could hold out for a year, as they were well stocked with provisions, whereas his unhappy followers had nothing to eat. He remained obstinate, and expressed his determination to hang on. There was great danger of a body of Haw coming from Sob Et, in which case his men would have certainly been dispersed.

with unfortunate results to themselves. I proposed that he should allow me to go to Muang Lu by way of Sawan and Sobet, and allow P'ia Pichu to accompany me as he was the commissioner of Luang Prabang, and those places were under his jurisdiction. This was agreed to, and after being twenty days at Tung Chien, Kan we departed, carrying with us all the wounded of P'ia Pichu's stockade. Arriving at Ban Le, we halted for a few days to see what could be done for the wounded, and arranged to send them on to Luang Prabang. Rossmassen fell ill, so he accompanied the sick and wounded. We kept about fifteen natives with us as an escort.



BUDDHA

CHAPTER XIX.

MARCH 10 LEAVING THE KA CHE

We halted for some days at a large settlement of Miao, between whom and the Hlaw of Tung Chieng Kam there was a close connection. There were upwards of 200 representative men of the Ka Che tribes. These tribes had been goaded into revolt some years before, when more than half of them were killed or died from starvation. They are usually called Ka Che (meaning slaves), and their homes are on the slopes of the mountains all over the Luang Prabang division. They live in communities, and the boundaries of village lands are religiously respected, being always marked where the paths cross. Clearings are carried on, and from year to year different places are brought under cultivation. If a village has not sufficient land to allow of a seven years' rotation, some of the community are compelled to seek other mountain slopes.

The tribes are usually Kamu, Kame, Pai, Lamet, Bit, and Hlok. At one time they were associated only with Luang Prabang, but after the rebellion upwards of 20,000 settled in the Nua division. The teak trade of Siam is carried on chiefly by their means, as they are sturdy and hard-working foresters, content with very small remuneration. They are all spirit-worshippers, worship consisting in partaking of a liberal feast in the spirit house. Running down the middle of this house is a long fireplace, over which great joints of buffalo-meat are roasted, and these are washed down with copious draughts of home-made spirit. The Ka Che have no written language. A legend relates that in days gone by the King of the Kas visited Luang Prabang, and there found houses made of brick and mortar. On inquiring how the lime was produced, he was informed that it was made from the rocks. Returning to his people, he suggested that they should also try to make lime. The

difficulty was how to break the lime rocks, the king told them to use their knives, but the only result of this was that all the knives were destroyed. Thereupon the people became enraged, and slew their king, but they immediately repented, for he was the only one who knew the Ka writing. That the knowledge might not be lost, they proposed cooking and eating the king; but this method of diffusing useful information among the people was of no avail, and the art of writing was lost for ever. They then had recourse to



MEO VILLAGE.

sending despatches on notched sticks. The number of the notches indicated the dignity of the sender of the message, and if it was urgent a chulli and feather were attached, meaning that the message must be carried out hotly and swiftly.

The spirit of the King of the Kas resides at Luang Prabang, and until very recently was presented with daily sacrifice. If a man falls ill, recourse is had to the use of sticks; the sticks are broken, and the manner of breaking indicates whether a pig, dog, or fowl should be sacrificed to propitiate the evil spirit.

A story is told of a man who was
of Kas-yi-ka-Bi, who lived with a man who was
invited to a feast by a man who was a
who of a tribe who was a
least was given a gift of a
elephant, they put it to use. When a man
sat down to the feast they were all
portion of meat they gave to the man, and the man



THE MAN AND WOMAN.

you to eat the whole of the thing and if it is a fact I may
have in an animal which, having a like skin and much larger
than a cloth and you give us a very small portion of it. You
are treacherous and we will have nothing to do with you.

On arriving at Muang Saw, we found 500 men who had been
settled there about six months, and who had consumed all the
supplies, without making the slightest effort to go more. Muang
Saw is important, having been once a scene of a battle between the

d flatter, hands of Haw were, as they were, among themselves. He to the Black Flags of Chao I accompanied Chao to Tung Ching Kun.

There were two routes to Muang Lu and we decided by S. I thought it was longer as we wished to see the people of the Haw, who were said to have splendid horses. At the same time he was sent to Chao by P. P. The son of the Chief of Luang Prabang told him that we would pay him a visit.

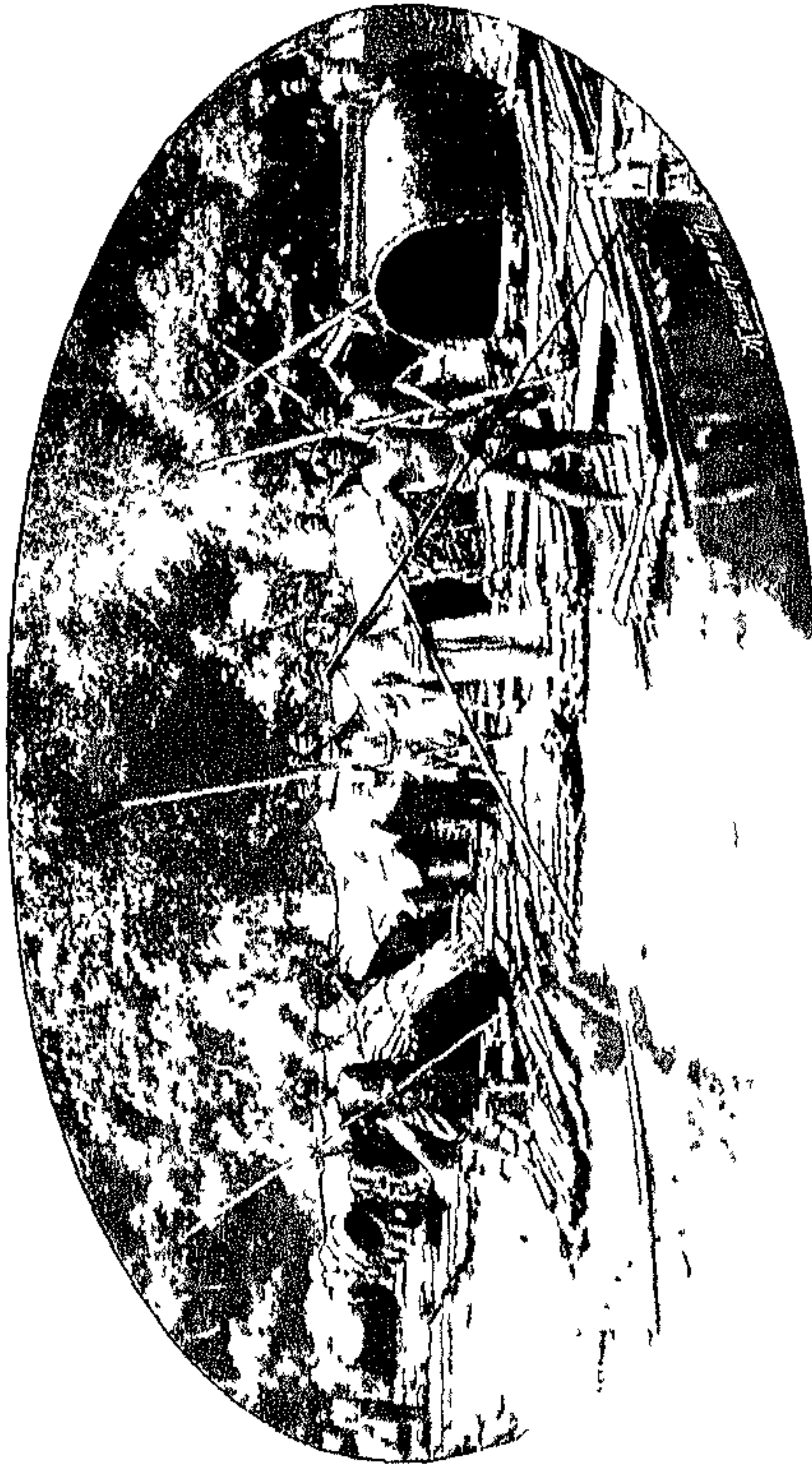
Everything seemed in confusion, but we went on in accordance with the general's plan. However, I shall now say a few



WOMEN BURMESE SAWN.

supplies of rice, and I saw a number of houses before reaching the right quantity. As we started for Muang Sawm or Muang Lu, the Nam Et, which looked a stream of considerable volume and examination, and Collins and I determined to go down it. The people told us this would be a waste of time, as we had heard so often of the impossibility of any route that we had tried for ourselves. The Chief of Luang Prabang, he did not seem to be amused with the notion, and accompanied us, and it was well that he did so. We started all night, but had a very early start. We found the river choked with rocks, over which we had to lift the

rafts. As we proceeded the rocks became more difficult and we struggled on, until at last we came to a narrow gorge with a fall of



EATING IN THE NAM LI

30 feet. To pass this was certainly impossible, and raft and river had to be abandoned. The day was so far advanced that we could

not rejoin the camp, but the Chinese did not know our
 spirit, and by nightfall, feeling a little weary, we each lit a pipe,
 where the Chinese soon became contentedly lulled and fell to
 a good sleep.

The next day we caught up the camp and arrived at Muong



VIANG KAO UA AN AN LA LANG K

Kao. Here one of the routes to Muong La I mentioned, but as the
 men had branched off too, and I suspected that Paili had
 connived at their running away. At Muong Xa we met a crowd
 and went down the river to Sob Pon. When we had reached
 from there it was reported there was no grain to be had.
 This seemed terrible, but I felt convinced it was a mistake.

CHAPTER XX.

FOLK AND PERSONS IN THE

MUANG TING is a magnificent plain of upwards of 60 square miles at the head of the Nam Nua, a tributary of the Nam U. It has played an important part for ages, and provided a refuge for the kings of Anam. About the middle of the plain, (see map) is an old fortification, Ching Lo, overgrown with jungle. It is

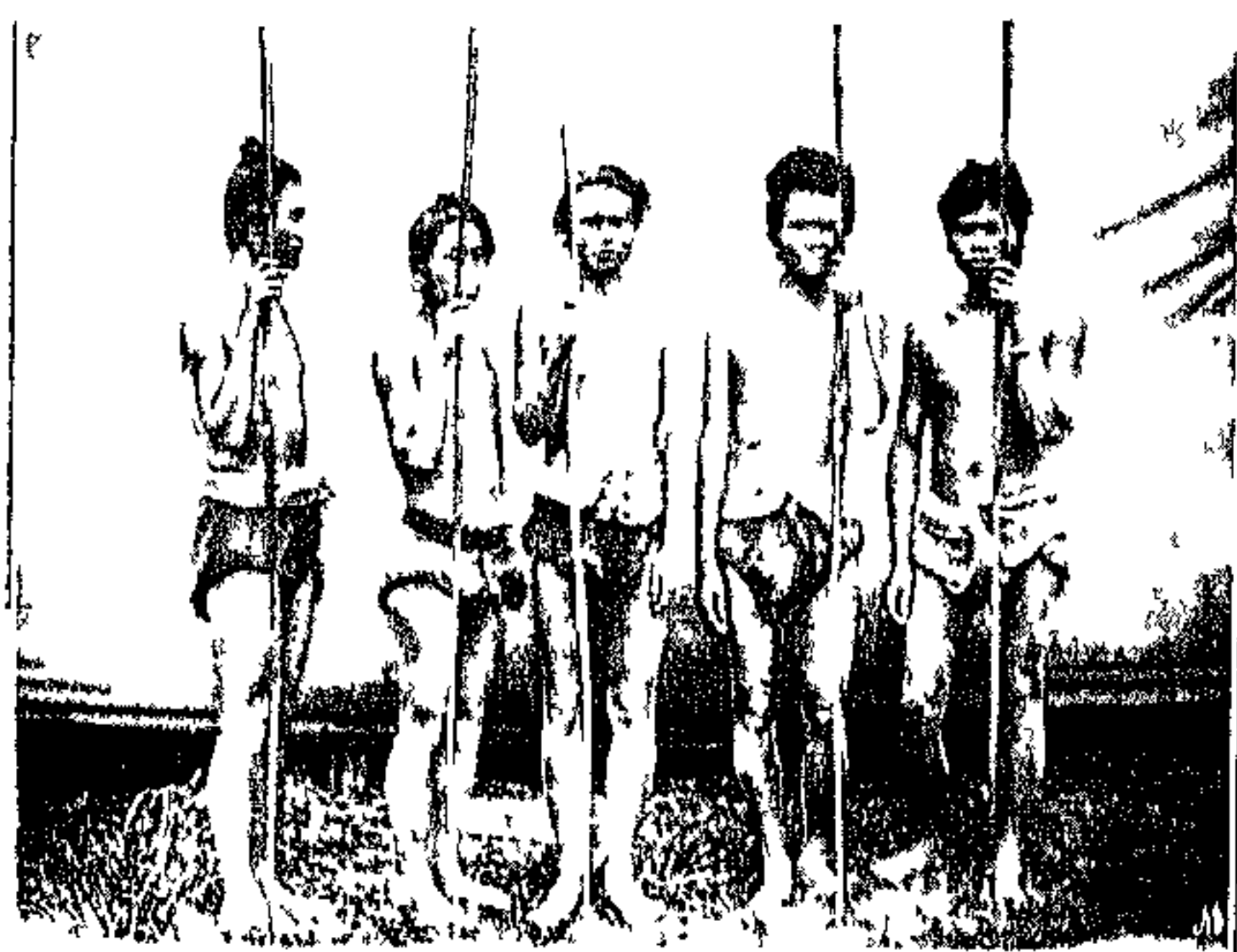


PLAIN OF MUANG TING

the first appearance of the Hlaw, under Lawl, a son of La (and the sons of Sibswi, Pana), sent from King Prome to attack him and driven off the robbers, killing the leader. The Hlaw, however, had returned and built a stockade on a small eminence to the south.

On our arrival we found the Ching Lo at the campsite, the condition not being improved by the terms of the previous

night. The whole camp, therefore, moved to a large clearing near Luang, while Pin Piel accompanied me to the Hwas. At the stockade, which was merely a low wall of logs at the corner about 12 feet high, Pu Ye and the chief of the Chao Lai, met us. He and his assistants were very friendly, and I invited them to meet us at the camp near Luang. After transacting our business, owing to the heavy rain and the sickness of the men, it was necessary to return, and we left this morning down the Nam Nua. Waiting a few days we gave the sick men time of recovery, and also let Chao Lai know that if he and we could not



THE CAMP AT LUANG

visit Maung Lai. He sent down two of his avuncular sons, Kam Kui and Kam La with presents of excellent porcs for the Chao, the commissioner, and myself. I handed mine over to the Chao.

The Chao of Lu's letter was very satisfactory. Maung Lai had always been loyal to Siam, and that he had prevented encroachment on Sibsaung Chua Tai by the Anamite king, who, ever since the appearance of the Haw had made efforts in that direction. An active agent for Anam was a man calling himself Kaito g, whom Chao Lai had treated as a son, but who had treacherously gone to Anam, had obtained assistance from Tuduk, and had then attacked his benefactor, who called in the assistance of the Black Flags. He

assured that whatever happened it would be in the presence of Kaitong anywhere. Shawing (the) He was an old man, and unable to visit us himself. He had sent his layman to represent him. His other sons had come to the case of danger, as there had recently been a flood in the Nam Tao (red river) between the Pind and the (the) only, and assured us that if ever we should go to Lal he would have much pleasure in welcoming us. These men were pleased to go, and



LAL KUI AND KAY A SON () AD A, W I A A A A

I was glad to meet them. On May 2, the Qu's birthday, there was a general gathering of the clans, and the Chas and the Pind were busy settling about future work while I was making a preparation for the journey to Luang Prabang, which I had not taken to reach by June.

In these countries there is a peculiar use of which is a trouble. A distinction is made between the law of the land and personal jurisdiction. Thus, if a man in Nawn, Ku's territory, goes to Piabang, he paid tax to the Governor of Nawn, Ku's use was

a Nawn, Kuman and to the Laing Pibang, which had to pay a tax, the amount of which was usually little or nothing. The Nawn Ka people settled in Laing Pibang gave 1000 year to the Governor of Nawn Ka but the children of the Laing Pibang citizens.

A still worse institution was that of *nomination*, in which over territory that belonged to different kingdoms. The Chief of Lai was the governor of territory, and the law was made in China, Siam and Anam (called *Sa Sa Na Pa*, or *tributary* in the directions). This arrangement gave rise to great complications. Lai



BEYQUANT (LAI) IN THE LAI PA WA

was established in the fifties, when the Chief of Laing Pibang, Chao Luang Seim, sent 1000 men to help in the settlement.

The late old Chief of Laing Pibang invested the Chief of Lai with powers for the administration of that portion of Siam (twelve provinces of Tai), which lies on the right bank of the Nam Te (Black river), and the Chief was always in trouble through resisting Anamite attempts at encroachment. Up to the advent of the Haw all had been peaceful, and Laing Pibang collected the revenues even from the Anamite settlers; for, as the old chief told me, had they not paid the taxes they would not have been allowed to settle. When Wieng Chan rebelled there was a period of trouble,

and the Siamese, following the latter, met the Siamese and
difficulties, drove out the Annames.

Kutong, the enemy of the Siamese, was a Siamese who
way. His father had belonged to the Siamese and he was born
in the province of Kwang Tung, China, his name was
Wing Wing Lung. As a trader he found a way to the Siamese
and was taken into the confidence of the Siamese King.
Annam, he had an audience of King Tulkwong, who appointed
him Governor of Pong. On his return he was
proposed by Chao Lai, and spent several years in his endeavor to



North China

the face in entrance into the country he had been upon the hill.
He sought assistance from Teng Hing (probably the same) and eventually
reached Teng but on the way many of his men were surrounded
by Chao Lai's soldiers and many were killed. He then repaired to Pong, where he met the Siamese and
consulting the bones of a toad, which for the purpose had secured
that the spirits directed him to the Siamese commission. He was
known to the old chief, who, far from helping him suggested that
his boat should be cut off, as it was now old and brought no help
into the Luan, Prabaig districts and caused so much misery.

On May 26, with our report to our new friends, we started with

but had not gone very far when we met boats, where we gladly transferred ourselves. At a rapid near the mouth of the Nam Nam one of the boats was stuck by a snag, and would have been a swamp-boat but for the barbed logs that stuck in the mud. It was a very troublesome accident, but it did not delay us long. On the evening of June 1 we reached Luang Prabang, where we were met by Collet and Rosenissen.



BUDDHA

CHAPTER XXI

THE LAWYER, THE AN-SENA, THE AN-VAAN

SIAM was determined on a rather different way with the new power was branching out in all sorts of places. With this intention one expedition was organized under Prince Surasak Mitr, and to operate in the country under the jurisdiction of Luang Luang, and another, under Prince Prachak, was sent to Nawng K. In the history of Siam were such opportunities given for pushing great things for the benefit of the country, and even the exercise of tact and ability so called "resources" is so.

Prince Prachak, a brother of the king, with Prince Surasak Deo, who had been at Wuchow, and was a brilliant general, his ability. He was also one of the best friends of the king. Prince Surasak, a cousin, was also one of the king's friends, and the confidence of the king. If these expeditions failed in the slightest details, it was to the king and the king's friends could be attached.

In the previous year Prince Prachak had been a member of the King's Council after three months, and to the king of Nawng K.

Prince Prachak went to Nawng K, and his active force and pushed on to Luang Chong Kum but he was expected to find that the birds had flown. He, however, burnt the stockade, and placed it beyond all possibility of being taken.

Prince Surasak fixed his headquarters at Phra Saw, where he remained during the rainy season, and went through a considerable amount of hardship. Later on the Prince was to go to the new place of the Nones was filled by M. Lavo, a man about thirty-five years of age, who had formerly been a soldier in the service of Siam. It was he who had constructed the line of telegraph

from Lungkek to Pataawing. He had no money, and the regions between Sam and Camlech, and the construction of a graph line through Anant'anki.

England had made a treaty with Siam, and the vice-consulate at Chien, Mu, in the province of Siam, was at Lung Prabang, though in the whole province there was not a single resident French subject, because, Anant'anki, in M. Pavie was now proceeding to fix up the details of the vice-consul.

As I was to go north and on P. S. Surasak's plan, it was thought that I might with advantage accompany M. Pavie, and the courteous French representative, Camille Kerguelen, arranged that I should do so. I had elected to go by way of Chien, Mu, to avoid interfering with the transport arrangements for the army to Lung Prabang, and this route also suited M. Pavie. But in order not to be involved in any complications that might arise in the future, I had the nature of our connection thoroughly explained. He and I, it was agreed, would travel together as far as his boat, and mine could be towed by the same launch, and our companionship should cease when we reached a point beyond which the launch could not go.

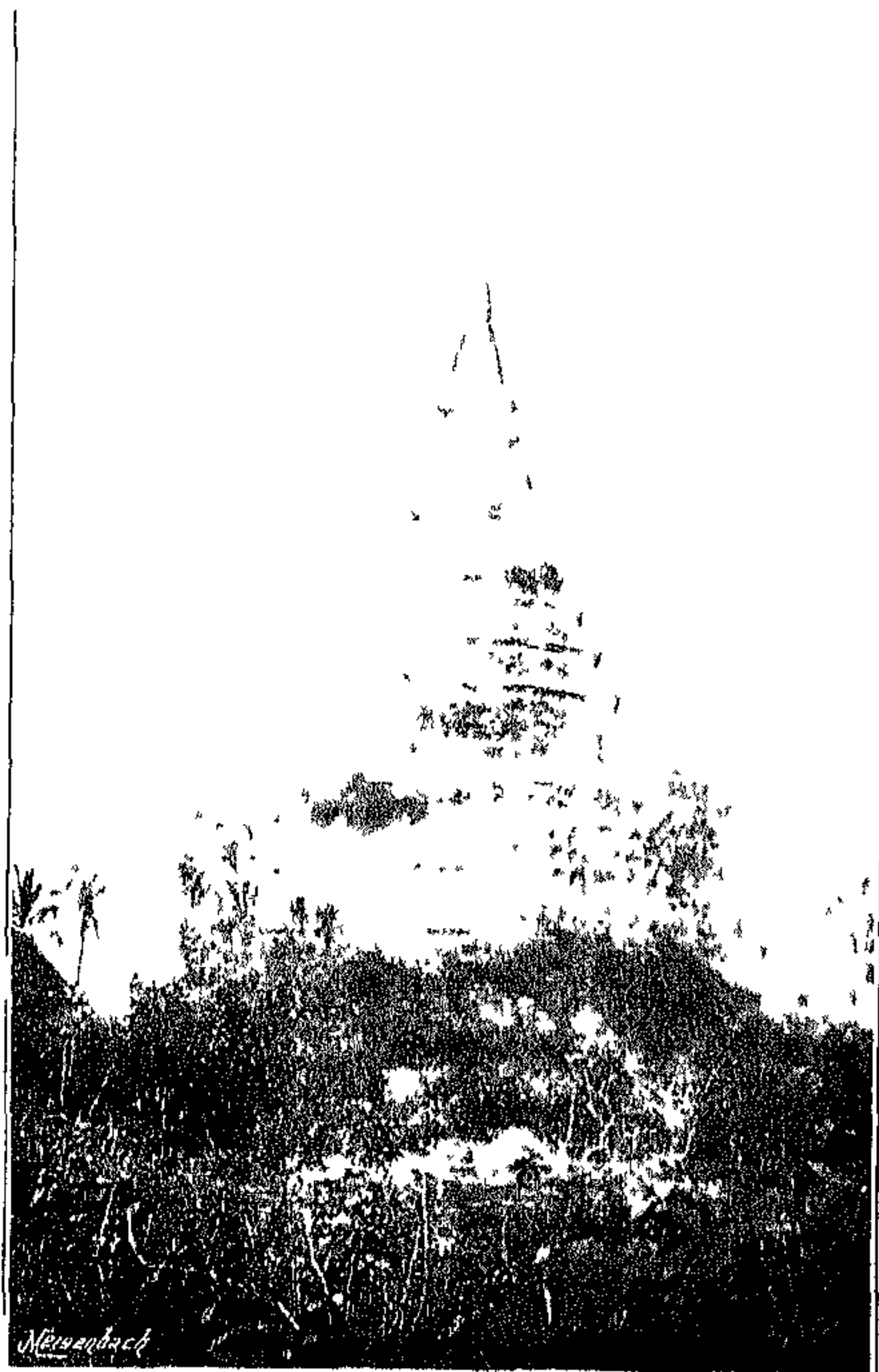
Above Paknam Port the launch towing us stuck in a sand bank, and, being swung by the stream nearly as size as my six-oared boat, which was lashed close to it. The launch, having got stuck, we could be towed no further, and I told then to M. Pavie, once, according to agreement, now going his own way.

M. Pavie was always courteous and did all he could to make the journey pleasant; but continued discussion with him could have led to no good in any direction, and, considering subsequent events, I am thankful that we separated.

I was accompanied by Collins and Louis de Plessis de Richelieu, and we hurried on to Chien, Mu, thence to Chiang, Ri, by boat to Luang Prabang, and thence to Muang Tung, where place we reached on December 6.

Pia Surasak had arrived a few days before, and had placed the sons of Chao Lai, who had been sent down to receive him, in a safe confinement. I felt sure there would be trouble, and wished to remain with Pia Surasak, but he objected to my presence. I then proposed to go to Lai, but he wondered what I could find to do there. Had he consented, I would have asked for the release of the sons of

On Lal, on the 18th of October 1934, when the
 were appeased, there would be a grand festival. Lower the
 man who, above all others, influenced the whole community,
 his influence stretching over the Sui-wan Peninsula.



LACODA IN LING VAI

had originally lived on the right bank of the Nan To; but, in the belief
 by the Chinese and superstitious natives derived from the custom
 pigs which, when about to litter, swam across the river, he had trans-
 ferred his home to the right bank.

P'ia Suasak was infatuated with the beautiful Chinese girl who had come to Teng, on account of his sons, and at the same time he was very susceptible to the famous Black Magic. He had a very peculiar feeling towards him, which seemed very much like those of the fly towards the spider, for he usually put off his going with some excuse, alleging at one time that he was keeping his grandfather's birthday, at another, that he was detained by worshipping the spirit of his other grandmother.

My idea had been that I should go to Mueang Lai and survey along the boundary of Siam, but my instructions were to place myself under the orders of P'ia Suasak. His directions were that I should go to Sep Et, meet a section of his army there, then follow the boundary of Hua Pan Tang Ha Tang Hok, and eventually go to Nawan, Su De Richehien, who had been taken ill, left by boat for Luang Prabang and Nang Kai, but Collins accompanied me. On my way to Teng, and at Teng, I was subject to severe attacks of cholera, but at Mueang Ya the attack was so prolonged that I was quite exhausted, and fever came on. Night was made hideous by the howls of fear of the village exorcising the evil spirits from some victims of fever. I fell ill on December 23, and it was not till January 10 that I was able to move off again. I then went to Luang Prabang and thence to Bangkok.

M. Pavie had in due time reached Luang Prabang, and had moved up the Nam U, but when he had advanced as far as the mouth of the Nam Nua, he met the Lao of Mueang To going full flight before the Haw, these marauders having been brought down by the eldest son of Chao Lai, who intended with their relatives to go to the assistance of his brothers. M. Pavie returned to Luang Prabang, which P'ia Suasak, who was now at Paklai, had denuded of such resources as defence he had possessed. The Haw continued then advance down the Nam U and reached M. Ngoi. There a narrow river-gorge, over a mile long, is commanded by a hill, whose limestone cliffs rise perpendicularly from the water. In the gorge the river is very deep, but the current is imperceptible, and boats descending can make no progress against a head wind. No hostile band anticipating opposition would attempt to force a passage, but the Haw evidently knew the men they were dealing with. They ascended the hill, and, seizing the excellent mountain howitzers, which had been provided for the defence of the position, rolled them over the cliffs into the river.

They then pushed on to Lung Pralang, and to keep their party at Wat Chong Tawng. Before their arrival M. Pavis and the Siamese commissioner had left. The Chao Uparaj had also left, but was recalled by the chief, who was determined to let Lung Pralang. One of the chief's sons enrolled some twenty persons as a special body-guard for his father.

The Haw now acted in accordance with their usual policy. Beginning at the Wat, where they had chosen their quarters they



A VIEW OF LUNG THAB NG FROM THE ON THE LANA VI KAW.

extended their murderous work throughout the town. The Chao Uparaj was put to death, and the old chief was compelled by his sons and Burman guard to go on board a boat, where one of his sons was shot before his eyes. Lung Pralang was then burned, but the historic golden statue of Buddha, called "Pat Bang," had been already secured by a wily old man, who had managed to sell it to him. The old chief met M. Pavis lower down the river and told them they went to Paklai, the chief going on to Bangkok.

During the next dry season the French made a final effort to

subdue the outlying provinces of Pank and invited the Siamese to co-operate with them. The Siamese, however, had not left the valley of the Mekong when the Black Flags attacked the Black Flags at Lachan and the Muang. They established themselves at Ming Tong where, meeting with no opposition, they quietly assumed jurisdiction over the Siamese country. Meanwhile M. Pavie, who had been provided with Siamese escort to whose plucky behaviour on one occasion, when surrounded by the Haw, he owed his life, had been travelling all the way to Sawang Chu Tai, and ultimately joined the French troops.



INDIA

CHAPTER XXII

RAILWAY SURVEYS AND TOWNSHIPS

ABOUT this time (1887-88) the development of the country by the construction of railways was under serious consideration and, through Sir Andrew Clarke, a contract for railway surveys was made with Messrs. Punchard and Co., English railway contractors.

Taking part in this interesting work, I accompanied Mr. Wilton Galway, the chief engineer. The line was projected to run to Ayuthia, the former capital, destroyed by the Burmese in 1787. Though nothing remains of the old city but ruins of stupas and pagodas, it is an important and populous place. An Ayuthia line was projected to Krat, and no return line to the Port of Bangkok, of annual pilgrimage, and thence to Lopburi.

Lopburi has many ruins of interesting works, built by the King Constantine Phaulkon, who rose to the position of Prime Minister of Siam in the year 1667.

The town is a few dozens of cattle-thick in the valley of the Nam Kung, the whole district being covered to some extent with cattle. From Lopburi the projected line was to run over the plains of the Me Nam to Utaradit, and thence to the new town of Pro. It was only in this last portion of the route that the hilly country was encountered.

Pro is a walled town about half a mile square. When the kingdom was under Nan, but has now a separate jurisdiction under its own chiefs. The town stands on the left bank of the Me Yai, which is about 1000 yards broad. Lower down the construction of the line had banks up the water, and during heavy rains the town is exposed to floods, which account for the dilapidated condition in which we found the walls.

Almost annually, during March and April, the town is covered

fire with such persistence regularly to suggest some thing more than accident. To the east of the town the Chinese had established themselves, and have introduced gambling, opium smoking, drinking, and every vice. As a consequence crime is rampant. During my visit a Ngio pedlar was robbed and murdered in the very gateway of the governor, and not the slightest trouble was taken to discover the criminal.

The administration of justice seemed punitive. A Chinese criminal had escaped, and the servants of the law were called upon to entice him back, ostensibly to give evidence in a case. Suspecting no danger, the man returned, and while under examination in the court he was deliberately killed by a blow on the forehead with a hammer used for marking timber.

At Pie I met a very interesting Haw trade man, Sulman Maumdin (Chinese name, Ma Yuch'ing). He had been a trader over the Lao country for fifteen years, had been to Mecca, Bombay, Calcutta, Rangun, and several times to Maulmein. He was accompanied by Sulman Maliki whose Chinese name was Ma Ch'ing, and who had never travelled before. He was then intending to go to Bangkok, and thence to Mecca, returning by Mandalay. Another companion was named Yusuf (Chinese name, Nuhing'ing). They were of the Watabi sect of Mahomedans, and smoked, as I ascertained when, in reply to the polite invitation to *bafo* (sit) in his small tent, I offered him a cigar, which he refused on the ground that his religion forbade the use of tobacco.

The three traders claimed to be Arabs, but, in accordance with Chinese requirements, each had a Chinese name besides his Mahomedan one. They had about 180 mules, carrying chiefly opium and some wax. As each mule had 133 lbs of load, there must have been at least 13,000 lbs of opium, but to dispose of this was now their difficulty. The Chinese opium-farmer was waiting for them at Utaracit, and they had the alternative of taking it back or agreeing to the opium-farmer's terms. But Sulman was already planning another enterprise, and that was nothing less than a bold descent on Maulmein. As he had been there "many times," he possibly knew of a way of persuading the official to pass his goods.

There were about fifty men, all looking well, except Sulman Maliki, who, not having travelled before, was suffering from fever. I gave him some of Dr. Gowan's "fever cure," made by the doctor

himself an excellent remedy, which I never saw of it, but which I have reason to know is not now made as usually is by the doctor. The wages of the muleteers, men, whom were twenty 'Kilins,' varied from ten to eight ruples a month. They stated that the route they followed was: Wei Ni Sing, which is called ko, to Suai ng, Ching to Tali, eight days; Tali to Puch, five days (must be at least), Puch to Sme, two days, Sme to Gung Lung (Samsu "Rung"), six days; Gung Lung to Mung Sing to Gung; Mung Sing to Mung Lan, six days, Mung Lan to Chong San, four days.

They were intelligent men, but it was impossible to get them to mark the route on the ground. They seemed to have no other direction. In this they were much inferior to the Laos, almost any of whom can, with a stick, trace on the ground the route of a road hitting off with remarkable accuracy the direction and distance. One could judge from the way in which the shoes of the traders' mules were worn they had come a very rough road.

These men wander about disposing of their Chinese products opium, wax, iron dishes, iron in the rough, felts, and walnuts. They eventually find their way to Muei, where they sell their Manchester calicoes and prints. These they exchange for the raw cotton and raw silk with which their mules are laden when leaving Chong Lung. Raw cotton was sold at 25 ruples for 33 lbs.

The proposed railway route I will trace back to Nakawa Lumpur, commonly called Lukwa. This is an old walled city divided into two parts by the Mu Wing. It was by the fact of this city that Chong Mar and his people were found. It is a very old hunting-ground for the Chinese, who have been collecting revenues, and oppress the inhabitants. During seasons of drought the people, having lost the knowledge of the old irrigation channels, suffer all the misery of famine. From Nakawa the route led to Lumpur, a walled city on the Nam River, rectangular in shape 3 miles in circumference. The walls and gates are made of mud and there is a large langng gong, about 5 feet in diameter and 4 inches thick, bearing an inscription. The old chief had made many miles of roadway in the province by simply leaping up the clay, which was very stiff. In Lumpur the people were left very much to themselves. In the evenings it was common to hear young men serenading with sweet-toned guitars, called *puas*, instruments

consisting of four strings stretched along a t-b-l-a-l, which was attached to the polished half coconut shell. When the guitar was played, the coconut portion was placed on the body, otherwise the notes were less pleasing.

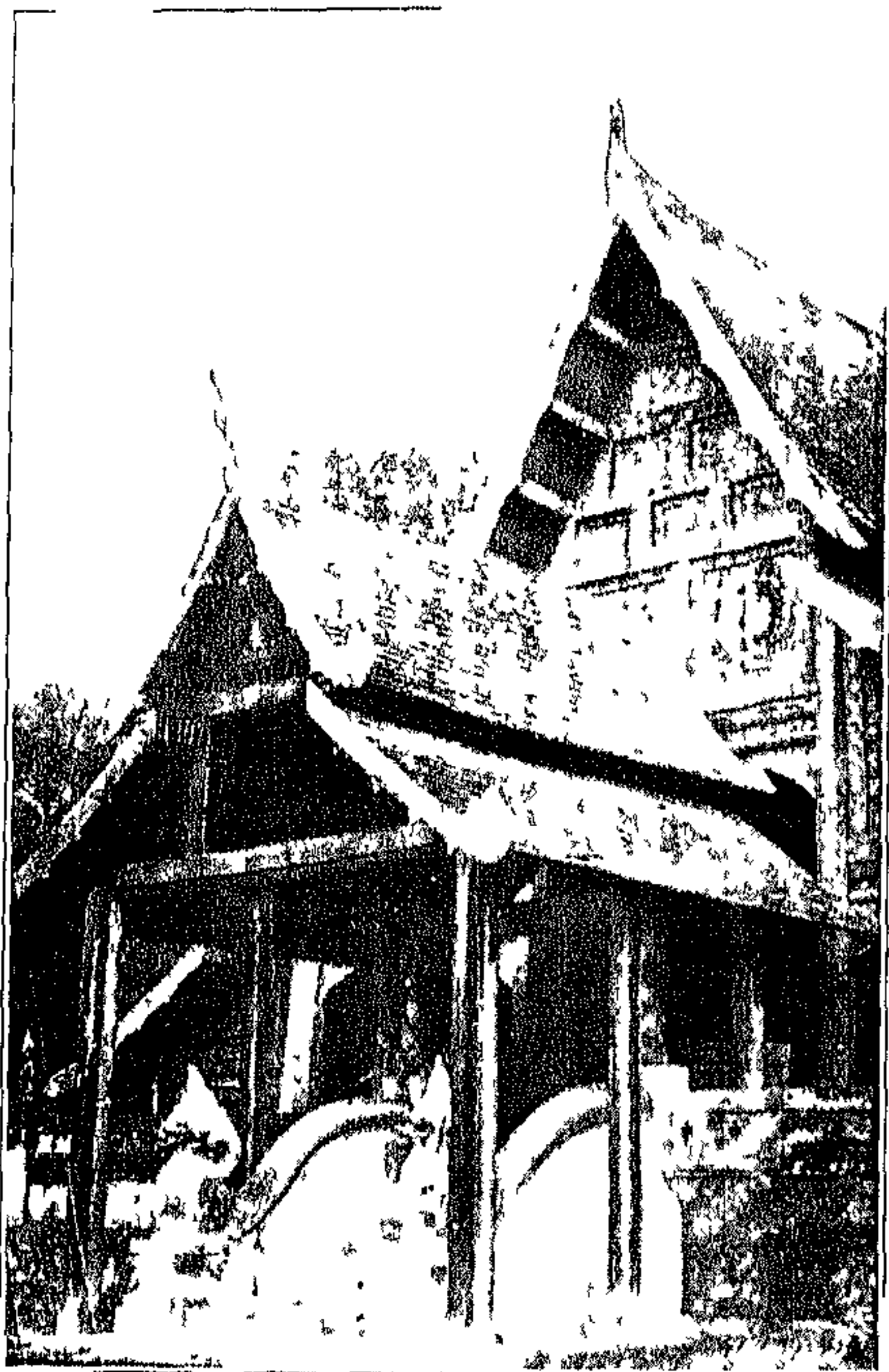
From Lampun to Chieng Mai a distance of 7 miles, the route is perfectly flat. Chieng Mai, the chief town of the Lao Pung Dam, stands at an elevation of 1000 feet above sea-level. It is 4 mile square, and is surrounded by a most high walls with five



LAO WOMAN OF CHIENG MAI

principal gateways. From the north corner a semi-circular earthwork, with an irregular outline as high as the city wall sweeps round to the south-west corner, its greatest distance from the inner wall being about half a mile. This wall, which has gates corresponding to the city gates, was built by the Siamese when under King Narai, they took the city by storm in 1686. Chieng Mai is laid out in streets, and the temples are numerous and handsome. There is a daily market, managed almost entirely by women, who do all the

buying and selling, and, as a result, the greatest number of races of people congregate here. The thing must have cost at not less than 3000 people, and not a single place in the



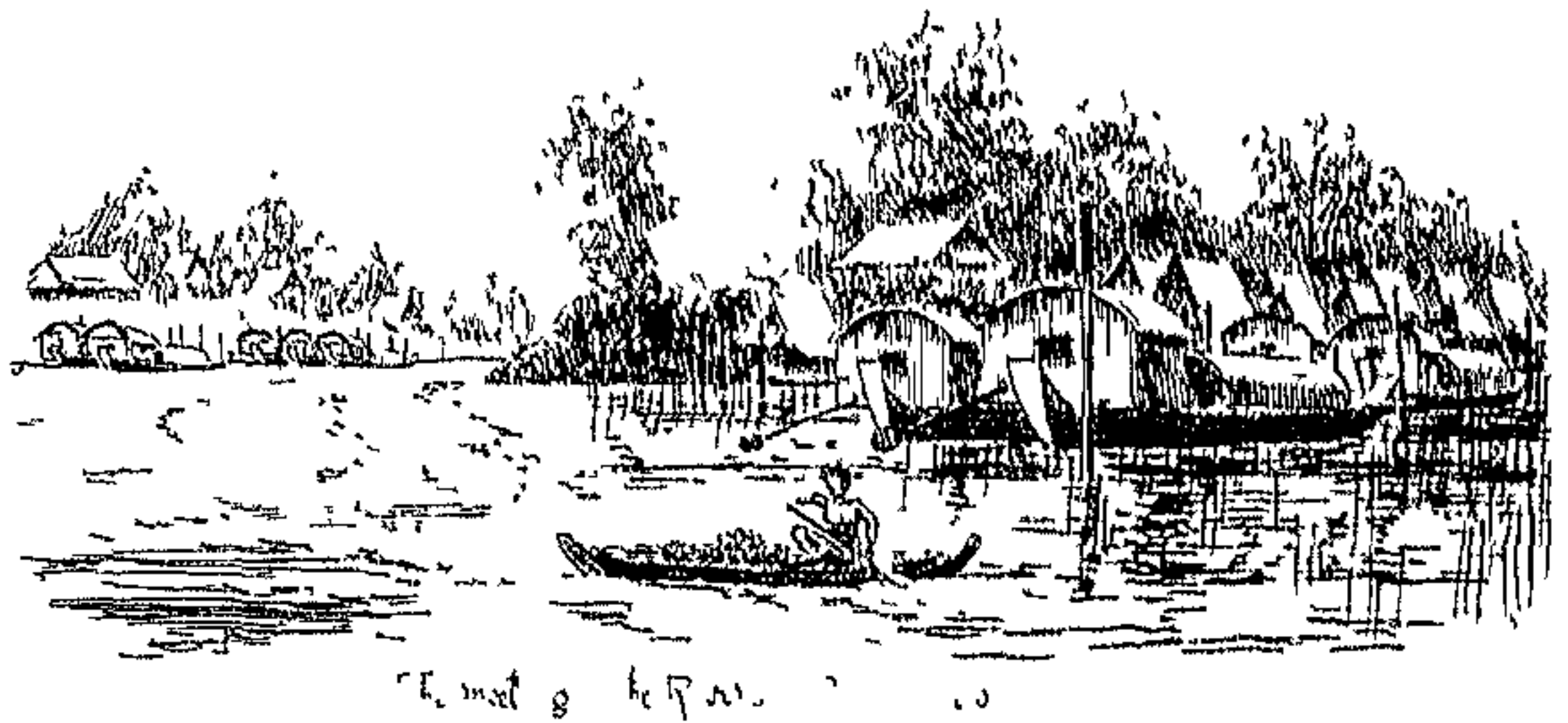
WAT (CHUNG) IN CHUNG M₂ I M₂

far as I could see, any necessity for the market was no unusual thing to see an elephant stalking down the market and a crowd of Yang (Karens), N₂os (Sinhon t₂ Salw₂), K₂os (Ch₂en₂ Tung), K₂u (from across the Nam K₂u₂ig) and even the

distant Silsawang Cha Tu, and How takers on Yunnan. Good order and the best labour prevailed among the people, and the scene was very interesting.

Leaving the Chiang Mai plain, the route ascended a mountain, a formidable obstacle to railway construction, and passed over a height of about 2400 feet above sea-level. It then descended to some hot springs on the Me Lao, and thence to Wang Pien which was established about 1855, when the Siamese army fell back from Chiang Tung. Thence the route went to Chiang Rai, and terminated at Chiang Sen on the Nam Kawa.

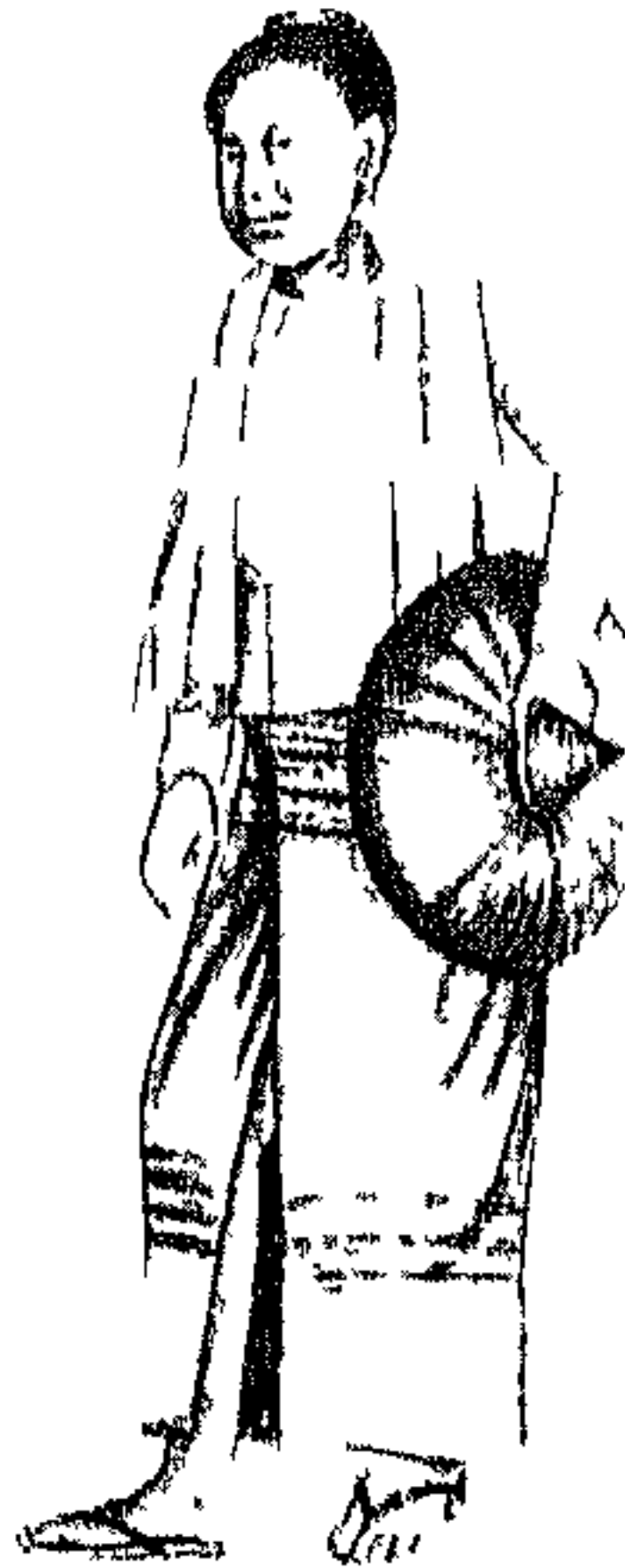
The whole of these railway surveys were completed without an accident. Unfortunately shortly before the time fixed for his departure, the chief engineer, Mr. Galway, went down the Gulf of Siam for a trip, and was drowned.



CHAPTER XXI.

FRONTIER DELINEATION, 1890

I NOW took up survey work on the north-west for the determination of the boundary between Burma and Siam. My position, however, was a painful one, for nine years previous service could not protect



SHAN WYAN

from suspicions of acting in concert with the English authorities against Siamese interests. As soon as the portion of work allotted to me was completed I retired, and I only recollect these matters

here because they led to my being appointed to attempt the examination of the borders of Siam, in the timber and forest regions. Amidst the tributes respecting the country for our survey there was one element of isolation—our young Siamese associate referred to as P'ia Sinsdi, whom I had known personally, behaved towards me in a most loyal manner, for his whole personal life. The well-merited promotion and success which I subsequently gained were very gratifying to me.

Associated with me in my new task were several Siamese gentlemen, some of whom had already been my companions in several years, and on December 1, 1890 we embarked on a small stern wheel steamer belonging to the Chinese in enterpriseing American who had spent many years in Siam. Steaming along the Me Nam, we first of all visited Bing-hai-in, where the court then was and took leave of the king. Up-stream we had a easy passage, owing to a few days' rain, the level of the river had been raised about 2 feet, and we were able to proceed as far as Nakawn Sawan, where we reached on the fourth day. In the rainy season steamers can go as far as Rahen, but in the dry season can seldom reach Nakawn Sawan.

At Paknam Po we divided into two parties. One I placed under P'ia Sinsdi, who had developed into an excellent explorer and traveling in difficulty, and taking the greatest interest in the work, to whom he had rendered loyal and substantial assistance. It was arranged that P'ia Sinsdi should explore as much of the unexplored territory as he could and then meet me at Muang Maung. An important element in our calculations was the probability of obstruction we should encounter on the part of local chiefs. Very often the season was unfavourable to our investigations, and, as without their hearty co-operation proper facilities for transport could not be secured, it was necessary to make matters as smooth as possible. I therefore set out for Chong Mai where the chief official of the north Siam is headquarters in order to arrange with him for the extension of our work. The boat in which I travelled was small but rapid progress was impossible. The river is wide, with a steep fall, but its channel is constantly being obstructed with sand, through which, in the dry season, passages have to be dug for boats. Often there is not enough water to float the logs of teak which are transported by means of the river, and they are then dragged along by elephants.

We passed one place where a desperate stream was carrying the log or 'hound, some 200 logs down to Paknam Po, about 50 miles distant.

Further up we had a view of Krapeng Pet (Duan Lu) at one time an important city. There still existed several old temples built of squared slabs of laterite, abundant in the district and there were many fortifications in ruins. Exploration of the district would disclose many facts of great interest in connection with the history of Siam.* Muang Tak (Raheng), the most important town on the Me Ping between Chieng Mai and Paknam Po, is growing in size and importance every year. The town is on the left bank of the river which here is upwards of 2000 feet in width. The governor's house is of brick and mortar, but the usual wooden houses and grass huts on raised platforms stretch for upwards of 5 miles, straggling along the bank, interspersed here and there with brick and mortar temples. There are about 20,000 inhabitants in this district, and, as is the custom, the bulk of the inhabitants live near the governor. In other parts of the district the villages—some of which consist of only two or three houses—are poorly built. At one time Raheng formed a portion of the Chieng Mai district, but it was given as a dowry with a Chieng Mai princess when she married a subordinate prince to whom it passed under the direct control of Bangkok. There is not much rice cultivation about Raheng. The fields for supplying the town are on the right bank of the river, which is here within seven days' journey of Maulmein. Many Burmese pedlars are busy over Siam travelling to Sukotai, Pitsanulok, and Pichai, on the Nya river, and thence to the valley of the Me Kwang to Muang Phalang, Chieng Kan, Nawng Kai. They positively swarm over the valley of the Me Kwang and are met everywhere, selling tin, silver, brass buttons with the Queen's head stamped on them, knives, matches, needles, and countless other things. With the proceeds of their sales they buy an elephant, raw silk, or gambon and return to their homes back to Burma. There is an excellent path to Chieng Mai through Tern and Lai, which elephants can follow arriving there in nine marches. The telegraph line runs along the path.

The governor, an old friend of mine, was absent on my arrival but the second governor was there. A keen explorer himself, he has

* A very ancient statue of the goddess Naga of Siam was stolen from Krapeng but is now in the Museum in Bangkok.

always been interested in our work, and gave great assistance to us. We were delayed a few days changing boats and engaged a crowd of Lao, who are excellent punters, or *polers*. The poles used were of strong bamboo, tipped with iron points about a inch or so, which enabled a better hold to be obtained on the trunk of a tree or on a rock. Walking towards the prow and on the land on the side of the boat, the "poles" throw forward the pole. As soon as it feels the bottom he turns, and, stooping low, presses with his shoulder against the end of the pole, moving towards the stern as the boat advances. There are usually three poles, while only one poleman is in succession, and keep the boat constantly in motion.

We soon resumed our journey, and on the day we started noticed a curious sign of the times, the despoiling of a full-sized altar-table to Chieng Mai. After passing broad reaches of sand where hundreds of teak logs were lying high and dry, we came to the largest tributary of the Me Ping, the Nam Wang, on which are the towns of Wang, Lakawn, and Tern, each the centre of an active tea trade. At Ban Na we took in a supply of ropes, and made preparations for ascending the rapids. Here the mountains begin to close on the river, with narrow narrows, and the scenery every day becomes more beautiful. We found a number of bullocks crossing the river, and making their way by a very difficult route to Maunmai. This suggested the question whether, even ten years ago, the people of the country were not more actively engaged in trade than now. Trade is increased in the hands of Europeans, Chinese and Burmese, but seems to have passed away from people of the country.

Meanwhile, we entered on the first of a series of rapids, and the boatmen, surprised at the additional energy required, plunged into the water, and with a good deal of noise got us over it. The rapids followed one another pretty frequently, there being thirty-three within a distance of about 50 miles. None of them was dangerous, and beyond the delay occasioned they caused no inconvenience. There is a legend that a Keng Soia party of men from a town near the present Muang Lai, in haste to reach the now ruined temple on the bank of the Me Ping, constructed a raft and actually shot over the precipice on the left bank of the river.

There seems little doubt that the ruined temple formerly belonged to the Lawas, a race that once occupied these hills, but is now almost extinct, the few survivors being found in the country to the west,

engaged in smelting iron. Not far from the river there are some abandoned rice-fields, where the sportsman may get a shot at a deer, or, if not careful, at an old woman, mistaking her for a noble stag. Such an unfortunate error happened not long before our visit, but the old dame was not much the worse for it.

Attempts have at various times been made by the people of Chieng Mai to settle in this region, but on each occasion the settlers have been "decoited." The dacoits, we were told, still give trouble and even committed murder at times; but there cannot be much danger, for I have seen men, solitary and unprotected, descending the river, without fear of molestation, on bamboo rafts. Europeans have never been attacked, though every year taking hundreds of thousands of rupees up the river in boats.

Below Ban Mukda the rapids cease, and the plain of Chieng Mai begins. Tradition says this fertile tract, about 60 miles long and 5 miles broad, was at one time the bottom of a lake—now every acre of it contains is under rice cultivation, with a most elaborate system of irrigation. Between Chieng Mai and the neighbouring province of Lampun the boundaries, if settled, are not easily identified. On a small hill we observed a graceful pagoda, called Doi Kang, which used to be associated with state ceremonies of the Chief of Chieng Mai when he passed this way. Such visits now seldom occur, and the pagoda is sadly neglected. The historical records of the province are entrusted to the spirits, and thousands of palm-leaf documents, tipped with gold, in teak-wood boxes, lie under the rocks on the bank of the river. This part of our journey was a little tedious, as we dragged our way along in the boat.

M. Hawn, the end of the land route from Burma, was the most important point we passed. There were a number of Kamus with the beautiful metal drums, which are always adorned round the rim with figures of hogs, and from this circumstance are called Kawng Kop ("hog drums"). The drums are used in the Lolo Karen country and in Siam are used only in royal ceremonies, and are called Kawng Mahamatuk. After years of toil the great ambition of the Kamus is to possess these drums and take them to their homes in the Laung Prabang district.

At the mouth of the Nam Kan there was a rather numerous village of lepers, who were allowed without restriction, to wander over the country, and even to frequent the markets of Chieng Mai.

At this spot we obtained every view of the mountain. To the west was Jui T'ai chi, eight S'70' high, the highest peak in the Chien, Mu province, and so the highest mountain in Szechuan. Then the rugged, rocky, and steep, 8 miles from Cheng Mu, still bold yet, we went on to go on to halfway up the mountain. We saw the river, Cheng Mu, now we were lost in the hundreds of boats and ships and it swarmed the river.



FIG. 1

CHAPTER XXV.

CHIENG MAI O MUANG TIMAN.

THE town of Chieng Mai had a busy and prosperous appearance, and its modern improvements showed the influence of Western civilization. The river was spanned by a substantial teak-wood bridge erected by the late Di Cheek who had also built a handsome teak-wood church, with a tower, the centre of the Presbyterian mission. The steam saw mill which had been set up by the same enterprising



THE SAW MILL.

American, was in active operation, with Kamu workmen, and substantial houses were rising all round. There was a residence of the English consul, houses and schools for missionaries, and a noteworthy structure, a fine billiard-pavilion. The pathways were excellent, and the water supply was good. The main supply was brought a distance of 8 miles in open channels from Doi S'iep, but there were also numerous wells, and a spring of very pure water had been struck less than 10 feet below the surface. In the neighbourhood is a large swamp which during the rains has the appearance of a lake, but which in the dry season affords an excellent clay for the making of bricks. To the north is the site of the ancient Muang Timan, on the downfall of which the present city came into

existence. On the west, about 2 miles distant, are the ruins of a small town.

The summit of Doi Sutop is 570 feet above sea-level and the pagoda, standing at an elevation of 550 feet, was formerly a place of pilgrimage once a year. The place was visited by Europeans, but to their intrusion of cetties were no use, and the men who had acted as their guides were punished. At the spot there is plentiful supply of water, and in the neighbourhood the missionaries erected a sanatorium. The site here was not sufficiently high, as the malarial region rises to an elevation of 6000 feet, and the building was left to be demolished by wild elephants. The hill, adorned with oak trees, possesses many sites admirably adapted for dwelling houses, and on the western slopes there are extensive gardens of tea (*meeng*).

This plant is exactly the same as the Assam tea plant, but as the use made of it is different, it is treated differently. There are on the mountains in different places large quantities of tea growing wild. The cultivated plant is grown at regular intervals about 6 feet, no pruning is resorted to, and the plants are allowed, as the Assam planter says, "to run to seed." The life of a plant is about twelve years. The soft leaves some of them 2 inches long, are preferred to the young tips, and are plucked four times a year: Mieng Hua Pi, about July, Mieng Kling about September, Mieng Sawi, about November, Mieng Mo, about January. The leaves are steamed in precisely the same manner as the glutinous rice which forms the daily food of the people. The narrow end of a closely woven basket, shaped like a truncated cone is set into the neck of an earthen pot, three quarters full with water. A sieve is fastened into the bottom of the basket in which the leaves are placed. When well steamed, the leaves are cooled into bunches, and buried. Salt is sprinkled over the leaves, and the whole rolled up into a hard ball about the size of a walnut. This is put into the mouth, and sucked all day. The people find it a great stimulant, and by its use are enabled to go without food for long periods. Large quantities of *meeng* are consumed, bullocks, and even elephants, being often laden with nothing else. It is regarded as a great luxury by the Lao princes, among whom it takes as important a place as the betel leaf and areca palm nut.

Chao P'ia Kialahom, who as P'ia Mahatop had been in Chiang

Mai some twelve years before, when a Mr. Ching So, was the special commissioner sent to adjust the trouble brought about by the so-called rebellion of the previous years. He was very conservative



WAT BING, LN MAI

and polite, fond of talking philosophy, and observing the effect produced on the listeners.

My old enemy, fever, seized me, and it did not enhance my energy as I jogged on all day along a very good road en route to Ma Tse,

The road was not particularly interesting until we reached Chiang Dao, an irregularly shaped village, surrounded by a city palisade. The peak of Chiang Dao stands boldly up 7000 feet above sea level. This is a very imposing limestone rock, springing almost perpendicularly to a height of 6000 feet above the plain. It is visible from Chiang Mai, and the people will not believe that any higher hill exists, though from a point a couple of miles below Chiang Mai at the ford, Doi Intanon, rising 8450 feet above sea-level, it is only visible.

In the matter of superstition, the inhabitants of Chiang Dao are unfortunate beyond most of their fellow-countrymen. They themselves accept the current belief in evil spirits, and they are regarded by their neighbours as associated with spirits in such a manner as to be dangerous. They are known as *Pi Pawb*, or spirit-people, and even their own headman, a minor prince from Chiang Mai, when obliged to hold official intercourse with them, recites a prayer to charm away the malevolence of the spirits. The prevalent superstition has been turned to account by an astute legislator of their own, for, according to the law of the district every one in whom evil spirit influences are known to proceed must quit the village, and take up his abode in one of the places set apart for such. These settlements are located in the borderlands, where there is a turbulent population, and the costly police which would otherwise be required is thus rendered unnecessary. When any one is seized with illness it is supposed that a spirit, assuming intervals from one of the spirit-people, preys on his vitals. The sufferer, long supposed to know whence the spirit enters, is placed with questions. If he is delirious, his answers are the more satisfactory, and whatever person he names is at once held to be convicted. His house is burned, and he himself, driven from the village, is glad to take refuge in one of the numerous settlements of the *Pi Pawb*.

Leaving Chiang Dao, I met four old ladies on a pilgrimage to the *Tap Tao* ("Turtle Cave"). The youngest was over eighty. Dressed in white, in a habit like a nun's, they had walked from Lkwai, and had been to *Prabat Si Rei*. They told me they would not be sorry if they died when making their pilgrimage. To lighten their burden, I undertook the care of some few things they were carrying and promised to have them safely delivered at the cave. The fact of these old ladies travelling about the country, and camping out, sometimes

in the angle far from any village, shows that the regularly beaten tracks are not, at least, free from the danger of wild animals.

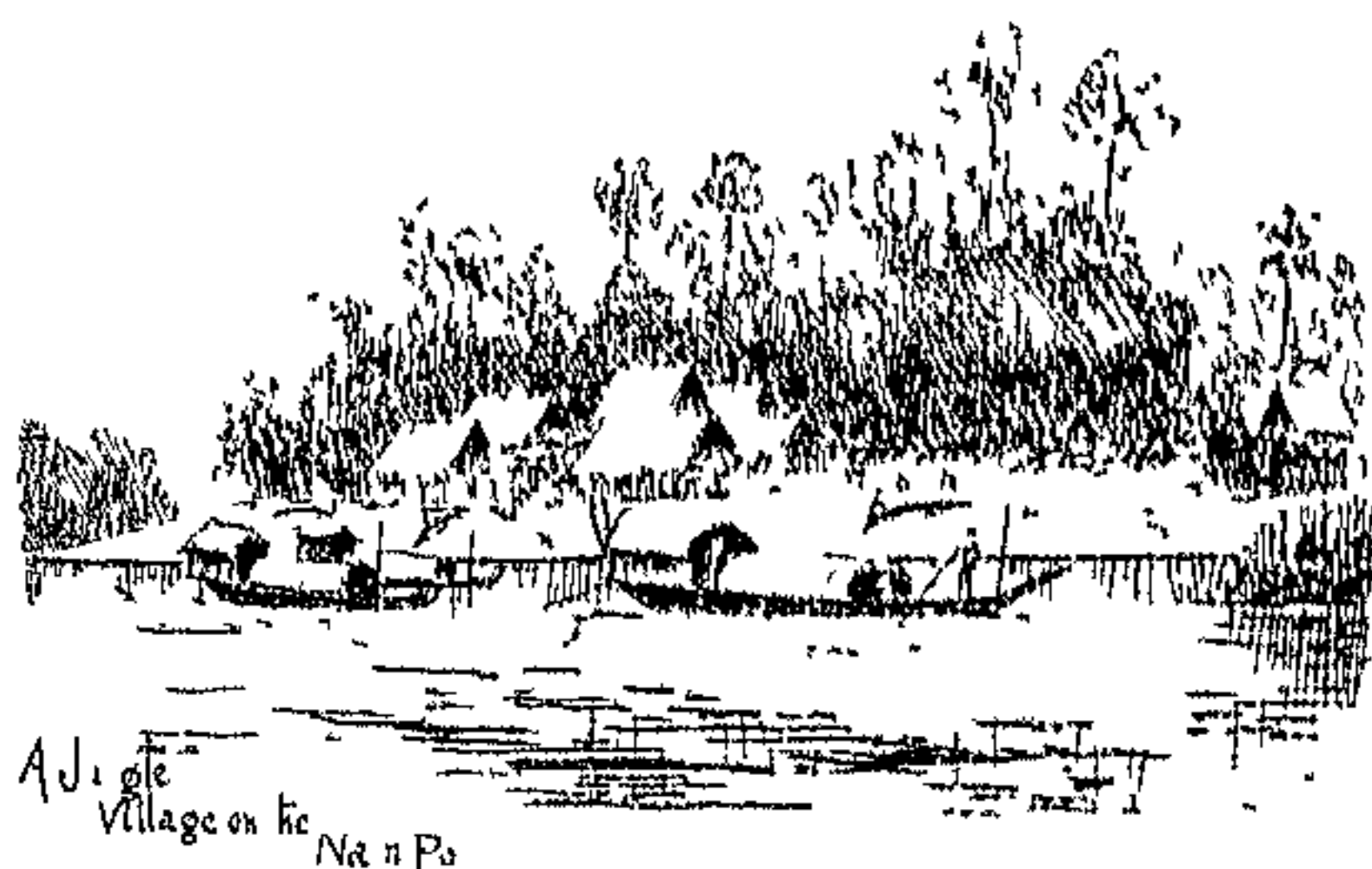
Approaching the main watershed we observed numerous limestone rocks, rising from 100 to 200 feet above the surface. Such rocks are plentiful all over Northern Siam. They are certainly very look formidable enough, but always have easy passages down the shelf which is low, with a rough up reach, has great blocks of rock cropping out all over and beyond it, on the side of the river is a large cavern, the entrance seems terrible small. The animals kill themselves by tumbling rocks into the caverns, and listening to the rumbling echoes far down in the darkness. The descent, which begins at the cavern, is not a difficult one to the plain of Muang Tang and Tam Tap Tao, where there is a very large swamp. When we arrived, preparations were being made to receive the King of Chiang Mai who was about to come on pilgrimage. But it seems a misuse of the word "pilgrimage" to apply it to a procession of 120 elephants, carrying pilgrims who live not more modestly than they would at home. In addition to the extremely comfortable journey, the visitors, on such occasions, have the excitement of the chase; for they join in a general hunt in that rich country where game is plentiful. I climbed over the high-yong property, and entered the sacred cave, which was full of images. It contained numerous statues of Buddha and Buddhist crosses and led to all sorts of fabulous places.

On February 7 we reached Muang Tang. The day was entirely clear after the previous night's rain. The town, old and new in shape, was surrounded by a mud and walls of high mud bricks with a backing of earth 2 feet thick. The walls had originally been crenellated, but now trees, not less than sixty years old were growing on them. A great deal of the town was walled, with a street or two roughly laid out. The surrounding rice-fields were extensive, but very little was actually under cultivation. The low pagodas were more than half in ruins.

At the junction of the streets stood a curiously designed building said to have been built by a man starting a new religion, the tenet of which was that the people should not respect the priests. Inside the town there is a small hill, with a brick and wood temple and pagoda, and through the town flows the river Mo Chai, which comes from Doi Pihem Pok ("Over Blanket Mountain"). The

magnificent mountain stands on the north-west, and as its position was fixed by the Indian triangulation, I came to the resolution to start my work from this peak.

The governor was querulous about P'ia Pap's poverty, which he said was caused by P'ia Pap and a number of ecclesiastics. For ten years a body of ruffians from the Siam had committed all manner of diabolical deeds, causing most acute misery over large parts of country. It was at the head of some of these that P'ia Pap had occupied the town. Fortunately, none of the ruffians had been killed. P'ia Pap's nephew had been wounded and taken prisoner. The governor complained that he had not the wealth to carry on government, and that the Chao gave letters to men of Chong Mai, enabling them to collect jungle produce and fish so that he could not collect revenue.



AJ. 101
Village on the
Nan Po

CHAPTER XXV

THE MUSUR COMBINING TRIANGULATION

I WAS anxious to make arrangements about Pahn Pok and as the head Musur was at Fang, I took advantage of his presence to make inquiries. The answer, I believe, was, "There are no roads and you cannot go." I asked how he managed to earn and why he should not be able to go where he went, as he was a very old man. "Yes—in ninety-four years of age—he was certainly over sixty—" but you must go to Muang Hlang, if you want to get to Pahn Pok." I replied "Muang Hlang is many days' journey while Pahn Pok is over there quite close at hand." He laughed, thought it a great joke, and said he would be glad if I came to his village, and that he would give me every assistance.

Later on the Musur paid me a visit, a little whisky warmed them up. One of them pulled out from his sack a long reed instrument, and they all joined in a Highland Flute. The man was proud of the performance, and they left in good humour promising every sort of assistance.

The next day I was able to get only ten men together but borrowing an elephant from a Sani settler I pushed on for the Musur village. The term "Sani" is a Burmese corruption of Siam, but in Northern Siam it is applied to the Tai of the Salween, whom the Siamese call Ngai. The Siamese also call all the northern people Lao, who, however, resent the term, and call themselves Tai. As early as possible I was off, having put my baggage on the elephant, and we were soon climbing the mountain along an excellent path. When we reached a height of about 1000 feet above sea level, we came on the extensive clearings of the Musur, and met some of the men quite at home swinging excellent axes of their own manufacture, and felling in every direction valuable logwood trees regardless of

their nature. The trees are allowed to remain where they fall for two or three months and are then felled.

Haze is always a serious obstacle to the progress of survey work, but with the smoke from burning trees added, it rendered operations next to impossible. As we mounted the hillside among oak trees, the air was very refreshing. Towards evening numbers of Muslim — men, women, and children — came over the hill slopes, and joined us on the main path to the village. They carried cross bows, antiquated guns, many of them of the good old Brown P. type, dating from the time when "George III was king" with the tower mark on each. About sunset we approached the village, from the stream the ascent for 200 feet was very steep, and it was growing dark as I took up my quarters under the trees just above the village. There were numerous naked little children running about, not very clean, but active, and great hill climbers. We boiled a little tea and about 7 p.m. the poor old elephant put in an appearance, after laboriously climbing up the hill. There was great commotion at his coming, an elephant never having been seen there before.

The next day I halted, and sent the elephant back, as fodder was not easily procurable. The village was in a hollow, and quite 5000 feet above sea level. The trees surrounding were all cleared. The houses, built on bamboo platforms, were thatched, the headman's being a little larger than the others. A house standing apart, surrounded by a stout palisade, no stranger was permitted to enter. This was the spirit house and place of public worship. One day in the week is set aside for public worship, and they told me that on that day he who enters must have fasted, but I think this was an obligation invented for the moment to prevent me from satisfying my curiosity. They say there is nothing inside but a few scrolls, which they received from their fathers. His statement also must be accepted with caution, seeing that in the community there is no knowledge of writing. It is said that the Muslim originally came from China, and, according to their own account, they were brave warriors, having been recently engaged in great battles. These people are evidently being pushed south, and it is necessary for them to have some story about the battles they have fought to satisfy the Governor of Muang Fang that they are not the advance guard of an enemy. They pay a trifling amount of wax as a tax, and are allowed free settlement.

They are the pioneers who clear the virgin forests and then move on. The Chinese are evidently developing in their own country, and pushing west and south; hence the strange sight of Chinese tribes, who in the last ten years have been learning to settle on the sides that no number of years ever approached.

With the elephant I shared the honour of exciting curiosity among men, women, and children swarming round me by all the trees and out of roots of bamboo. The very small children were slung on the backs of the mothers, and peered with their small eyes over their shoulders.

The women had the hair fastened in a knot on the top of the head, and wore a turban with a broad flap above. For earrings they had hoops of silver, from 5 to 7 inches in diameter and a quarter of an inch thick, and round their necks they had circles of silver and circles of cane. These little are an absolute necessity in the life of the women, as with out them the spirits would carry them off. They wear jackets and skirts, a horn with a key-wind on the side, and in the case of the richer class with large silver buttons.

These tribes practice monogamy. They say they originally came from Muang Ke, under China, but when I questioned them I could only ascertain that they came from two provinces—Cing'ung and Chong Rung, and not from beyond the Nam Sawng.

There are eleven tribes—Pik, Pcho, Hui, Su, Pli, Koi, Kulio, We-ga, Hoi, Cing'ung, Hoi, Nu, and Law. Only Cing Rung. I can only tell in the universe of the spirits of the mountains. They burn the dead to free from disease, and bury those who die from some accident. This is the custom of the Lao.

Willow tea grows all over the mountain. The Musum used the leaves, but they did not cultivate the plant. Near my tent was a tea tree, which, 2 feet above the ground, was 2 inches in girth.

I got together some Musum, who provided themselves with axes, and, with their supplies in baskets on their backs, trudged with me to the top of the hill. Over nearly the whole of Indo-China the climbing of the highest point of a hill is not so easy as it looks. The forest is very heavy, and not even a glimpse of the surrounding country is to be had, unless one climbs up a high tree at the summit of a lofty peak. This was a duty I used always to undertake myself, but I found I was not quite as nimble as I had been and found in my

want of agility by many anxious moments. Often we found we had not reached the highest point, there being a higher in another direction, perhaps 2 miles off. Then hacking through jungle and forest growth down and up steep slopes, wading about and resting at half a dozen likely points, at last we gained the top.

If it happened to be raining walking was impossible, for it was very difficult to keep ones footing, and the trees and plants hid every thing. In our difficulties the little aneroid showed what a useful companion it could be, for it showed any variation in the height of the mountain one was in search of, this valuable little instrument saved a good many moments of doubt and anxiety.

Pahom Pok, however, was not difficult and on February 24 I reached the top. To the west was a gap in the hills, which made the clearing all the more easy, and we started hacking the trees at once.

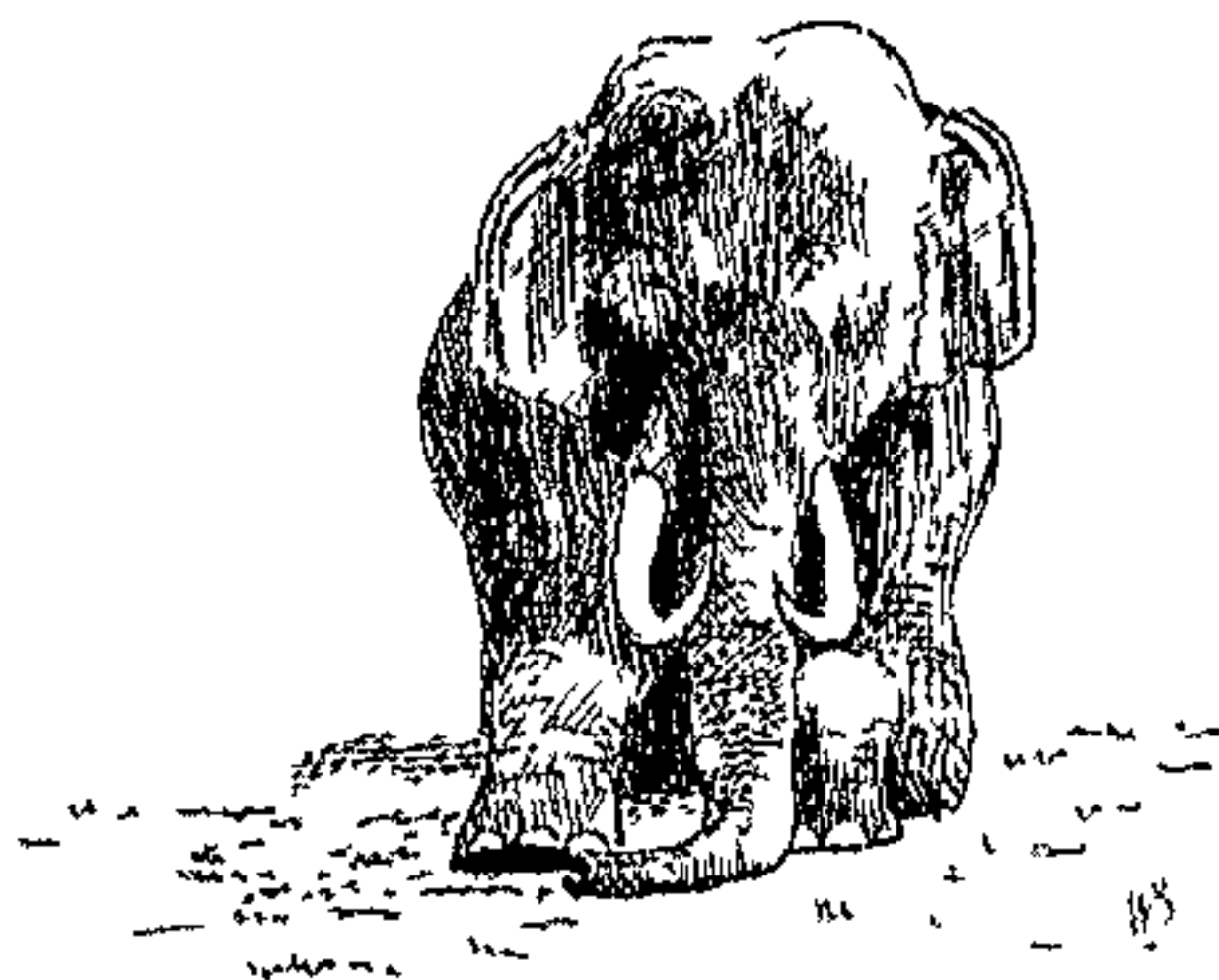
On February 25 every available man was busy, and the Musm showed themselves excellent workmen. On the evening of the 26th we were ready, and all but two signal trees were cut down. The haze had set in, and there was a gloomy prospect for the work. Some strangers put in an appearance, and called themselves Musm Sulong. They were very Chinese in appearance, the women did not wear the Musm skirt, but wore trousers.

A strong wind was blowing from the west, and remembering the forecast of the signaller of the Indian survey I was hopeful. The Indian signaller always held that south and east winds increased haze, but that the west and north winds drove it away. Haze is always heaviest in limestone localities.

Strange to say, the morning of the 27th was gloriously clear, and the remarkable peak of Chieng Dao stood out well. The longitude of Chieng Mai had been determined by telegraphic signals, and Chieng Dao fixed from Chieng Mai. Therefore I wished to feel sure of the position of Pahom Pok, and, observing for latitude and azimuth, started triangulation which might be carried round Siam. The late General R. G. Woodthorpe, C.B., kindly supplied me with the Indian survey value of Pahom Pok, and on this value the whole of my work has been based.

Looking over the vast expanse of mountains clothed to the top in forest, I resolved to advance over the country. The triangulation seemed a gigantic task, and one which could only be accomplished

roughly, but, even so, it seemed to be best method for the survey. Checks of latitude and azimuth could be taken, and at intervals there was enough flat ground for the measurement of base lines. The great difficulties were the sparseness of the population and the heavy jungle. The haze had now settled in, and I am told it was hopeless to attempt any triangulation work, so there are filled up the time with chain and compass traverses.



Waiting for 2nd bowrah

CHAPTER XXVI

WORK IN CHIENG SEN

When I returned to Muang Fang the Chief of Chieng Mu was at the sacred cave, going through his pilgrimage, and the Musur of Puhom Pok had been sent for to amuse him. The old Musur's entry into the town was in great style. He was seated on a pony, and, as the weather was warm, he had dispensed with his coat, a gold umbrella being held over him. He was immediately followed by a number of Musur blowing their favourite reeds, and others with swords and guns. The rear was brought up by a woman, decked out in a great quantity of finery, and evidently representing all the beauty and all the wealth of the maidens of the village. The Chief of Chieng Mu entered in state with 120 elephants. The late Dr. Cheek accompanied him.

Preparations were also made for hunting over the plains of Muang Fang. I accompanied Dr. Cheek, who had about twenty elephants to beat up the different varieties of deer and pig, but in attack or fever marred my enjoyment of the sport. Though game was plentiful, we were not over successful. One party was chased by a wild elephant, which had been giving trouble to the tame ones.

The chief left Muang Fang in great state, with battles blowing and drums and gongs beating. He was seated on a magnificent tusked elephant; before him marched about fifty soldiers, and behind him a large company of men armed with spears, while his favourite wives, each seated on an elephant, graced the rear of the procession.

Pia Srisdicome at this time into Muang Fang. He had completed an excellent round of work. There were now eight young Siamese gentlemen with me, and I arranged to send them measuring routes in all directions, making Chieng Sen their rendezvous.

On March 15 I started from Muang Fang, traversing. It was so hazy that mountains a couple of miles off were invisible. I passed

through some villages of Ngaisse Alais from Chang Tung, Muang Heng, and Muang Tum, who were looked upon as being excellent guards. Until the English occupation of the Shan States, the entire Lantia people of those regions knew no peace, but were scattered in all directions. Some of these settlers in outlying guard-stations were very poor. They had to look to the forests to supply their wants and had constructed temporary grass sheds while clearing the jungle for paddy land, which was to supply them with food for the coming year.

The previous year P'a Pap in his flight had taken refuge there, others had followed in his track, and had lived the wretched huts of Muang Yawn and Wieng Ko across the Nam Kok. The path led through thick bamboo jungle, and, as I had fever, my progress was slow, it seemed hard work clambering up and down the hills.

On the 24th there was a thunderstorm, with very large hailstones, one of which I examined. It had the shape of a strawberry, very smooth at the broad end, but the rest rough, as though composed of four or five different hailstones. It was 1½ inches across. The atmosphere had been temporarily cooled, but the people, anxious about their fields, had begun firing the jungles. The clearings had been made some months before, the cut trees had had time to dry, and were now cleared away by the falling ashes of a great fire. The smoke added to the haze, rendered every thing in the distance invisible except the sun, which pierced the gloom with a dull red light.

The Slans of Muang Yawn may be regarded as very honest, if the character of a whole community may be learned from the behaviour of one man. At that town I had procured a Shan guide, and now sent him with thirty rupees to buy rice. He was absent all day, and brought back a large quantity at a cheap rate. It would have been easy for him to return to his home, and he certainly would have done so had he not been so busy with "dacoiting."

I reached Muang Tum on the 28th, quite knocked up with fever. The two headmen came to me, and very politely told me that Muang Tum belonged to Chang Tung. I explained I had not the settlement of the question, but was merely inquiring about the boundary. As I was very ill of fever, I went to bed as soon as the tent was up.

Muang Tum is a very fine plain at the foot of the Nams, surrounded by lofty peaks, which the Mons were cultivating. The inhabitants are of the race known as Kachaks, and they have the reputation of being the best people among the Siamese. All through the afternoon a number of tastefully dressed women and children brought presents of cakes, molasses, and eggs, and with most engaging smiles said they had come a long distance to make presents.

The Bank of England could not stand the ruinable currency. In the course of the day some extraordinary looking fellows put in an appearance, tattooed from neck to heels. One fellow, who said he was the Governor of Muang Kwan, was very important, and wanted me to retrace my steps, saying that he would not allow me to go to Muang Kwan. The Paw Muang told me that the fellow was from the west of the Salwin, and had been with the adventurer known as Twet Nalu, who had done great mischief. The Chief of Chieng Tung kept him as a fighting man, and had employed him a short time before to commit some murders at Chieng Lu and Muang Lin (or M. Lin). He also told me it was this man's followers who had killed and robbed some unfortunate traders from Nawn K in January or February, 1889.

A great number of villages were settlements of robbers, it being thought a good plan to have robbers on the borders, to act as guards. Some of the traders I met here were Chinese Siamese, and it was pleasant to see how they stood up for the Chinese. While I was running over a sword, I had a good opportunity of ascertaining some of the Chinese methods of government.

Whenever the officials in their journeys, I was told, stop at a place, the inhabitants must supply them and their followers with provisions for three days, but after three days payment is made for all supplies. The only grievance seems to be that the Chinese head official insists on being carried on the necks of the people—of course, in a sedan-chair.

A Chinese Shan trader desired to look at my gun and to fire a shot, but was in no way surprised at the breech loader. It pleased him immensely to hear the noise, but, returning the gun, he said they had much better ones in China, where you could fire ten shots at once. I noticed that the Chinese Tai seemed to talk purer Siamese than the Shans from the Salwin.

An image of Gautama was being completed, and offerings of

silver were being placed in an opening in the chest of the figure. The Paw Muang gave me four guides, who served us faithfully as a guard, and we moved off to Muang Kwan. On the way we met with some men digging for gold. Muang Kwan is in an excellent position, with undulating hills and a goodly number of rice-ceds. I pitched my tent on the river bank, and saw nothing of any interest there. All the settlers were from the Salwin and the westward is the Shan states. A number of them, tattooed from head to heels, kept fighting about the camp. I noticed a little boy, about ten years old with about twenty other lads as followers. They told me he was the son of Twet Nalu, the adventurer of the Salwin. In marching to Muang Kwan I followed the path over the mountains. The way was a path down the Nam Sai, but it had been made difficult in order to facilitate the escape of the robbers. Our road passed through the clearings of the Kaw and a number of abandoned villages. The houses were very large and substantial, but the Kaw never settled long in one place, as soon as a couple of deaths occurred they attributed them to the evil influence of spirits, and moved off to another locality.

I was not able to meet any of the people. On the side of the path, about 50 yards across the stream, I saw an old woman with a load on her back, toiling over the clearing, which was overgrown with charred trunks of trees. She was accompanied by two children, and as soon as the men caught sight of me they left the old woman and scampered away, skipping like monkeys from trunk to trunk. At intervals they pulled up and spoke encouragingly to the old woman, who seemed not to be using the Choest language.

I met a number of Musurfi in the country east of the Mo Kwan, taking buffaloes to Muang Kwan. The buffaloes were loaded by hundreds of Muang Lam, being taken to buy them. I noticed Ben Paw, an abandoned stockade, near which was a deserted temple. The stockade and temple were built at the same time, and were intended to be in a position suitable for a guard house. The men and women were thus established side by side, and, the object having been accomplished, they were abandoned.

From this we passed over the plain of Ching Sen, which owing to great floods, was almost bare of trees, the few that did exist being very stunted. As we approached the town of Ching Sen we observed a great number of logs. The town was situated very low

hills, all famous in local history, and the old governor, who was a nervous and excitable man, and I think the second governor, had extraordinary and very wild legends about them.

To the south, and beyond the low hills, about Chakong, is a large swamp teeming with fish, on the east is the whole of Mu Kung, and, as the soil is very productive, the people gain a easy livelihood. Every man in Siam is an excellent farmer, and the cultivation of fruit trees is a favourite employment of wealthy men, who take a delight in making the soil disclose its riches.

Chieng Sen is remarkable for its excellent castles of Chutana. Some are very large and very beautiful. At one time there were hundreds of those known as *Khatamaput*, regarded by the Siamese as being very ancient. As they were of a convenient size, they were carried off to Bangkok, where they would be better suited for. It was looked upon as desecration that they should be allowed to moulder away in ruins. The inhabitants of the city are nearly all officials, for the settlers, chiefly from Lampun, live in villages scattered over the plain. The settlers pay no taxes, the life is so good and easy, and it is very difficult to induce them to work.

The son of the governor came to tell me that some Indians were coming. As Indian surveyors had been working in the neighbourhood, I thought it not impossible that they were coming again after having completed their boundary work. I was rather surprised to find two Europeans put in an appearance, one was M. Massie and the other M. Vacle. M. Massie was from Luang Prabang, from which place he had gone to Sai, and thence to the tea-gardens at the head of the Nam U Ibang, and I was. In this region he had been joined by M. Vacle, a resident of one of the Tonkin provinces, and together they had gone to Chieng Hung, but before their arrival there Mr. Scott had already left for Chieng Tung.

They had come to Chieng Sen by way of Muang Krong, and I had been much interested in their journey, but felt somewhat disappointed that the English mission had been over the ground before them. They had the French colonial new coins, the *piastres de commerce*, about the size of a Mexican dollar. They could not however, use them, and I exchanged the good old rупee for a few of them. I do not think the *piastre de commerce* will ever travel like the rупee, which, a few years ago, I saw current nearly to the shores of the Gulf of Tonkin.

The two Frenchmen were deeply interested by the ravages of the cattle plague, which they thought would spread in many directions. On April 20 they left Chieng Sen by boat for Nong Bua. In a few days they were at Chieng Sen they found themselves agreeable companions.



H A

CHAPTER XXVII

WORK UNDER DIFFICULTIES

To the discomfort of the river, which had been plaguing me for months, were now added troubles incidental to the survey work. Pua Sisdi came in to tell me he could discover no mountain where I had indicated one, as the haze and smoke had been so thick that nothing could be seen. Another Samsoe informed me that all his cutters had run away, and he did not know what to do. Rain had been falling, and the atmosphere was very muggy, so I pulled myself together, and on April 25 left Chong Sen. I stopped at a small hill, Doi Palu, and had it cleared, marching the men by degrees to the work, in proportion to the heavy labour involved in clearing some of the hills, where the trees were of immense size.

At Ban Mechan, which is in excellent position at the junction of the roads from the north to Chong Ma, in waking the men I found that the men had run away. The Governor of Chong Sen was now on his way to Chong Ma, but when I showed him that his duty was not to leave the district without responsibilities, but to remain and give me all the assistance in his power while the favourable weather lasted, he complied with my views and decided on helping me.

On May 1, having succeeded in getting men together by noon, I set out and, in the evening, encamped at the Hot Springs. These springs were the most remarkable I had seen. In many parts of Siam hot water rises to the surface of the ground; but here jets of boiling heat played from openings in the rock, in some cases to the height of 2 feet, and all round there was a din and hum as if from many small steam-engines. At one fountain there was a natural sulphur spray.

Moving along the Me Chan, we left one of the Chao's sons with

elephants and ponies at the foot of the hill, and, passing through Musui settlement, we encamped at a small long village, where the people of Muang Ngum, having been burned out of their homes, had taken refuge the year before.

The next day we had rough work cutting our way through the thick growth, and towards nightfall descended to look for water. The jungle was heavy, and the ravine so steep and narrow that had difficulty in putting up a tent 6 feet square.

During the night we were disturbed several times by tigers, and the shouts of the men made it difficult to ascertain whether any one had been carried off. As I had lost a man in the Malay peninsula in this way, the suspense was very distressing; but, fortunately, on this occasion there was no casualty to record.

In the morning the Musui guides struck tracks for their homes, and we had to go on without them. Their departure was no great loss, for they seemed unable to understand exactly what we wanted and had often led us wrongly.

The small bamboo jungle was very thick and full of tracks of wild cattle, that seemed very plentiful. Wild tea grew everywhere. The stumps of trees bore marks of the axe, showing where other travellers had passed. Our effort was to reach the highest point of the deeply serrated ridge, but mists and rain impeded our progress, and our rice supplies began to run short. After we had climbed the summit which seemed to be highest, the mists rose, and revealed a higher not a mile distant, but as the interval was occupied by a steep gorge, which it would have taken a whole day to cross, we resolved that the peak on which we stood, one of the range called Sam Sao, would, in the circumstances, serve our purpose.

There was a little trouble about the referring-lump for our observations, as the utmost distance at which I could place it was 300 yards. A tiger prowling about and howling made it uncomfortable for the men at the lamp, and my observations were somewhat hurried.

The next move was to a mountain called Ban Sen Pen at the summit of which stood a Musui village. My Chinese cook now caused much trouble. He said he had the fever in him, and he was constantly losing himself in the forest on one occasion being absent all night. I found means of sending him to Chiang Rai.

At this time I was seized with an extraordinary complaint, suffering from constant vomiting and pains so severe that I was compelled to lie down frequently on the side of the path way, and the marches were very distressing.

On the hills were numerous palm trees, which seemed to be of the species described by Humboldt. The fruits were in bunches, consisting of several bunchlets, and were eaten by the people, who knew nothing about the liquor so highly praised by Humboldt.

Local superstitions prevented our approaching the hill top, on which was a spirit-house and, to the north-east, a hollow, 2 feet deep and 40 feet in diameter said to be an ancient silver mine, but now overgrown with trees thirty years old.

Here, as in other Musur villages, there were a great number of children. The men are about naked, and covered with scarification marks of trees. Observing a man in the crowd admiring his countenance in a looking-glass attached to the cover of a tin box in which he kept his tobacco, I borrowed the mirror, and frightened one of the youngsters by showing him his own face. He ran off like a hare, and was soon vigorously washing himself at the village spout. The children were keen beetle collectors, and in purchasing the specimens they brought me I found a ready and the only way of disposing of the few *muscles de commerce* in my possession. The village was very filthy, but as it was on the top of a hill and exposed to great storms which came sweeping over the Tereng, Pua Yao, and Chiang Rie plains, it was better off than it deserved to be.

The Musur cultivate cotton, Indian corn, betel, and rice. Their rice is that known as *Lao chao*, or "prince's rice," to distinguish it from glutinous rice, which, nevertheless, is eaten by princes and peasants alike. The name of "prince's rice" was puzzling to our men, and to those from Ch'ing Shih it suggested a grievance, inasmuch as they, being Lao, were entitled to prince's rice, but partook only of the common sort. The forests contained wild mangoes and other fruits, which on our way to Nangle came in useful, as the rice had run short of supplies.

From Nangle an excellent view was obtained of the surrounding country, but the top was bare and flat, and to clear it of the large trees was a heavy task. Two of the trees I left as signals, and then

descending to Chieng Rai, connected Doi Tat T'ung (Hill with the Golden Relic ').

Chieng Rai is a walled city, and claims to be very ancient. The old governor was ill, and the town was neglected, being overgrown with jungle. Here we had much trouble, as the authorities would not give a man to assist nor even sell rice, asserting that the tops of hills should not be cleared of trees.

Before stopping the work for the season, there was one other high mountain I should ascend. Leaving Chieng Rai the next day, I crossed the pass, which was so low that I scarcely perceived it, and encamped at Ban Mechan, from which place Doi Tung was seen distinctly. Doi Tung is a name given to a mass of mountain, from a pagoda built on a peak overlooking a perpendicular limestone precipice, formerly a place of annual pilgrimage for the Sha's of the surrounding country. The highest point of the range is Chung Map, which we were about to attempt. We pushed on through the village of Hue Lai, and encamped at the foot of the hill, meeting a number of people, chiefly women, washing for gold. The mountain rises beyond the range of malaria, being over 4000 feet high, it has oak trees, and affords an excellent view over the Chieng Sen plain and the mountain-range beyond.

I returned to Chieng Sen on June 7, and felt great relief in taking up my quarters in a comfortable house. I had passed through much trouble which would have been a great deal worse but for the assistance given me by P'ia Srisdi.

The triangulation round Siam had been started with great difficulty but still a beginning had been made. To prevent delays in taking the field, I resolved to remain at Chieng Sen during the rainy season.

After seeing my things in the house, I went out to employ some work on a small hill about 2 miles to the south. While taking a round of angles, I was horrified to see my quarters in flames. I was too far off to think of hastening to the rescue, so I finished my work, and then descended to find my place burnt to the ground. Most of my things were saved, but P'ia Srisdi lost everything except the clothes he had on. This was a terrible position for him to be in after a severe season's work, but worse was yet to happen.

Nai Tat, brother of P'ia Srisdi, had started to Muang Sing selecting

his own room. He had not been gone six days when Pat Susdi came and woke me up at twelve o'clock to communicate the news of the murder of his nephew. To my mind he had been the quietest of all the Siamese I had known, and could have given no provocation for this cowardly outrage. I set out for Hawng Luek to make inquiries, but the chief of police, the guard station, meeting me on the way, begged me not to go, as there was a plot to murder me also, and my steps had been dogged for the last month by assassins. I had ten men from Chiang Sen with me, fifty fathoms, and the poor fellows would have proved the asses I met in my journey, but as it was more than likely that my interference would only add to the complications, I returned to Chiang Sen to devise means for bringing the murderers to justice.

Nai Tat had had ample experience in jungle-traveling, having years before accompanied the French officers over Chiang Kwang, Luang Prabang, and Hua Pan Yang in Yunnan.

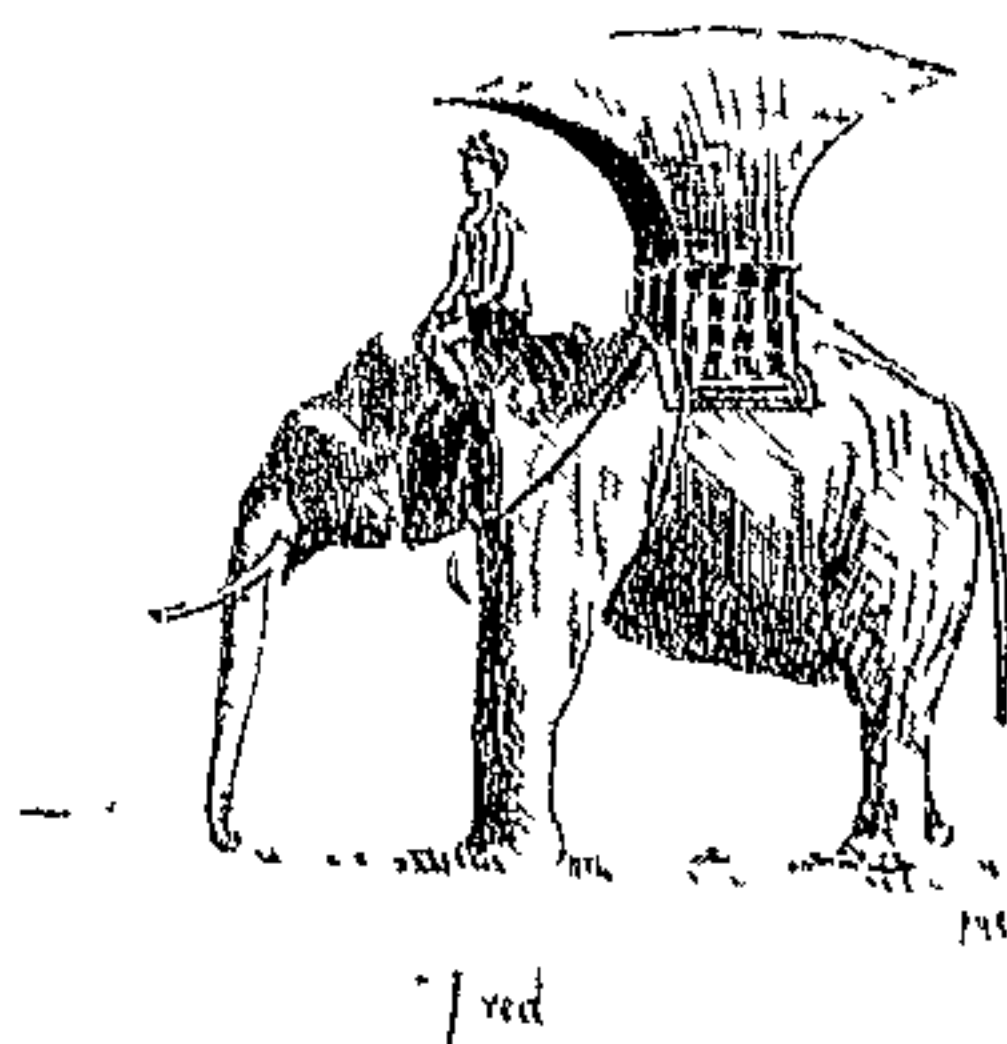
Provided with money to purchase provisions and to hire guides for his journey to Muang Sing, he had passed through Hawng Luek, a rendezvous of dacoits from the Salween and had encamped beyond Muang Ko. The governor of that place was a Kachin, and undoubtedly trustworthy. There in the moonlight on the evening before the murder, Nai Tat had seen about thirty men pass, among whom he had recognized some from Hawng Luek.

On the morning of June 5, ignorant of danger, he was moving up to the pass to Muang Lem, when suddenly shots were fired, and he fell wounded. General firing took place, and the Siamese threw down their loads and fled. Nai Tat was not dead when his assailants proceeded to mutilate him, hacking off his fingers and ears, and then cutting his throat. They then rifled his pockets, tore the buttons off his coat, took his watch and chain, and carried off the twenty-eight loads of baggage, in which were a chronometer and sextant. Nai Tat's companion, a lad of eighteen, who had been learning the work, happened to be among the carriers at the time, and the assassins deliberately fired at him. He escaped to Muang Ko, and the governor, treating him kindly, accompanied him with an escort to the scene of the murder, where together, they assisted in the burial of the victim.

I forwarded a telegram to Mr. Scott, the superintendent of the Shan states, but, unfortunately, he had been transferred to Lashio

After some time investigations were made, but the only result was a vague statement that somebody had done it.

I sent Pia Srisdi to Bangkok, and, as all my people had fever I decided on remaining for the rainy season at Chieng Mai. Thus I did very reluctantly, as it meant delay when the time came to take the field.



CHAPTER XXVIII

ACROSS THE MOUNTAINS AND VALLEYS OF THE NORTH

ON July 5 I left Chieng Sen, descended the rugged cut over the Me Kawng, and, as the current was very strong, I reached Chieng Kawng in less than six hours. This city, protected by a wall on three sides, but exposed towards the river, looks as though surrounded by mountains, and one would little suspect that beyond the low hills on the south is the wide plain of the Me Nam.

At the western extremity of the hill-range there is a small settlement, and a pagoda has been erected as a memorial to a famous Burmese warrior, who died on his return to Burma, after a successful expedition to Luang Prabang. The wide, open forest covering the hills is of teak, probably the finest teak forest in Siam. On the left bank of the Me Kawng there are no teak forests, the great river serving, apparently, as a natural limit to some sections. At least, the flora of Indo China.

In the neighbourhood of Chieng Kawng we found that much excitement had been caused by the discovery of supplies, and that the stones had my great value. In various parts of the province of Nan precious stones have been found, and at Muang Sa, a little further south, they were said to exist in great quantities. At that town there were over 1000 resident Burmese, attracted partly by the teak forests, but chiefly by the precious stones, for it was well known that the Chinese Nanai, like the Salaks of Burmese, and of that nationality having caused much trouble by forging his seal to a document.

On July 12 I left Chieng Kawng, and traversed the route along the base of the hills, where there was an excellent road. Near Ban Tung Yang, we went over the low pass between the valleys of the Me In and Me Lao. The pass does not rise more than 750 feet above Chieng Rai.

There the peculiar limestone is as 200 feet high, on which there is a sacred footprint, and in the neighbourhood are the ruins of an old town. The west approach had very heavy jungle and cane brakes, and an open space with shade awakened a feeling of superstitious awe. This was said to be the haunt of spirits, and there was a legend of a number of Hw (Chinese) having been massacred there in days gone by.

The region would probably form a happy hunting-ground for the geologist, or in similar localities elsewhere there have been found fossil remains of monster reptiles. About eighty years ago the Burmese army had gone over the pass and ravaged the valley of the Me Ling, destroying Pia Yao and Mung Tching. This latter place has been recently rebuilt, and is the capital of a great district which flourishes by the teak trade, the working of antimony, which is there found in large quantities, and the discovery of gold.

Descending to the valley of the Me Lu, the path went through long grass over a country flooded by the heavy rains, there was not a breath of air, and the heat was intense.

On July 7 I reached Chung Rai, still suffering from fever, and wearied with heavily trudging over the wet ground. After a few days' rest I procured an elephant and set out for Chong Mai along the route which the Siamese Government had carefully surveyed for a railway.

On July 27 I reached Chong Mai where the lively European community had received considerable accessions. There were now over a dozen missionaries, the railway engineers had been provided with quarters in the town; and we found that local interest had for the time, centred in some of my races which the whole population, including the old chief, had turned out to see.

I was able to find quarters in a comfortable house belonging to Dr. Cheek, and there I "resided" during the rains finishing the computations in connection with the work, and preparing for the triangulation which had been begun amidst such difficulties and obstruction.

In three or four years the rainfall all over Siam had been extraordinarily short, and in Chong Mai the effect was felt not only in the rice. It was alleged that he had shown too little regard for the pagoda on Doi Sutep, and in consequence was said to have appeared commanding that the deity should be provided with a new top.

decorated with precious stones. The chief was also expected to proceed in state round the city, and the spiritual ceremony proved interesting as it gave an opportunity for the display of the finest elephants in Chien, Mu.

I had given two months notice for the departure, and wished to leave Chien, Mu not later than October 1. But the had come and gone but no time to spare. The weather was now brilliant, Chieng Dao standing out clearly defined, and, not altogether to lose the opportunity, I started traversing routes to Muang, Haw returning by the paths along the left bank of the river.

The system of irrigation adopted by the Lue is impressive from its completeness. The tributaries of the Me Ping are so thoroughly drawn off and dispersed in channels to utilize fields and gardens that, as far as the Me Chin, none of the streams could be said to reach the river.

Near its source the Me Chin flows through wide forests of the long leaved pine, and in its lower course through excellent teak forests. At one place, however, the channel contracts into narrow gorges which render the passage of the logs downstream almost impracticable, the force of the current being such as to shatter the wood to pieces. Attempts have been made to blast the obstruction, but with little success. Near the mouth of this river, and on the Me Ping near Chien, Mu, are seen the excellent light wheels of about 20 feet in diameter, peculiar to this region. They are constructed to raise water for household purposes, but are also used in irrigation.

Worthy of notice, also, was the excellent attempt at road-making by the Governor of Lan, un, who has caused a path to be piled up along the whole length of the route. In the country generally the construction of roads has been left to chance and time. The first pioneers usually struck the first line of communication, and, armed with knives, cut through the thick undergrowth. They were followed by others, and the constant going to and fro permanently established the path, which, like a long snake, winds its way through the forest. To this day the making of a road is accomplished merely by hewing a path through the jungle, a process which has to be repeated from time to time to keep down the dense growth.

The Me Ping forms part of the boundary between the provinces of Lan, un and Chien, Mu, but elsewhere the boundary follows the

limits between fields, and gives rise to endless disputes. A still greater cause of trouble is the curious arrangement by which some tracts are under separate jurisdiction.

The telegraph line after being interrupted for four months had been at last restored, and I was informed that the survey staff had been increased by the addition of two more Europeans Messrs Smiles and Angier, who had already had two or three years' experience of Siam on the railway survey. I also heard that an expedition, under Pua Sursi was proceeding by way of Nan to meet me at Chieng Kawng.

Smiles and Angier having started from Chieng Mai, I followed next day, November 29, making a slight diversion from the well beaten track, as I wished to define accurately some routes. On December 11 I reached Chieng Sen, having noticed nothing worthy of remark except that the Chinese caravans, on their way to Maulmein by Chieng Mai, were larger than usual, and the number of parties from Chieng Tung and Muang Sing following the same route were rather more numerous than on ordinary occasions. The Musm came down from the surrounding hills, bringing chiefly cotton and wax, which they bartered for areca nuts and betel leaves.

Arrived at Chieng Kawng, I met Pua Sursi, who had come by Nan, and, as usual, done excellent work.

On a previous visit to Chieng Kawng I had calculated the discharge of the river at a spot which was not favourable for a section. The banks were over 2000 feet apart, and the lowest level of the water more than 50 feet below the bank. The discharge was taken in March when the water was at its lowest, but it amounted to upwards of 2,000 cubic feet a second.

We immediately set about ascending a conspicuous hill to the west. Near the top were some Meo villages, and it was amusing to see the villagers come up and, in a 'holly-gool-toll w' manner, shake hands with the Chinese as a token of salutation not being customary with either the Meo or the Lao.

The village graveyard, with tombs built of loose stones and mud, was well kept, but it was the only clean place in the neighbourhood. Meo villages generally are polluted by the poultry and pigs which are allowed to run about. But though appearances outside were not favourable, the condition of the dwellings inside was comparatively satisfactory. Eight years before the Meo were not to be found on

the right bank of the Nam Kawn, but in the interval they had been swarming down.

One of their tribes which I was able to make out to name has the reputation of extraordinary shyness, and is distinguished also by the remarkable arrangement of their women's hair. The great event in the life of a girl is the plastering of her hair with bees-wax, a covering which is allowed to remain for several years. To relieve the irritation of the skin which is induced by this, and other causes, the girl is supplied with silver needles set in thimbles adjusted to the fingers.



Of all the hill-tribes, the Yao are in every way the finest. They have clever silversmiths and metal workers, and the axes they turn out would compare favourably in shape and finish with any American axe, while their method of cultivation is more thorough than that of the neighbouring tribes. The women have an elaborate hair-gear well protecting them from the sun, and their embroidery work is beautiful.

The Yao seem to be peaceful, hard-working Chinamen from the hill country of Kwang Tung. They consist of twelve tribes—Lao Li, Lao Pong, Lao Chao, Lao Tuen, Sin Pan, Sin Pung, Sin Ton, Sin Chao, Sin Chang, Sin 'uen, Sin 'u, Sin Lang. To these should,

perhaps, be added a thirteenth, known as Lanten, which differs very slightly from the others. All the tribes now stretch across the Me Kawn, and the hills that have formerly been the habitat of wild animals are being occupied by men who live peacefully under their own headmen, cultivating opium and other crops, and paying light taxes in the form of produce.

Having completed the work on Donuang Me Kan, I turned my attention to Don Tum, a convenient hill across the Me Kan near Muang Kang. There were, however, difficulties in the way, as in the previous season the boundary mission from Punnah had gone to Muang Lang, and had formally taken the place over as a dependency of Burma. As all the population subject to Muang Kang were subject also to Muang Lang, there was a disagreeable hitch.

Chiang Keng was a small state more or less dependent on Chiang Tung, and its ruler was always a relative (recently brother or uncle) of the chief of the dominant state. Before the British occupation Upper Burma had been the scene of constant warfare and outrage, and when order was enforced by the British administration, the turbulent element of the population found a ready refuge in Chiang Tung. The Chief of Chiang Tung had at first taken a dislike with his brother of Chiang Keng regarding tolls at certain ferries on the Me Kawn, and, unfortunately he employed the Shan refugees to enforce his rights. The position of Chiang Keng was a narrow cultivable one, but never been regarded as satisfactory, and now by these hostilities it was rendered untenable. The 'chie', therefore, turned his attention to the plain of Muang Sing only a few days' march to the east, where there was a surplus of a few acres of fertile land, well watered, and fit for rice-cultivation. There, however, complexities of old date were in existence. It is known that, in the old days, this fertile plain had been under the administration of Sisawn Pan. Muang Sing was situated to the north of the state of Nui and on the opposite bank of the Me Kawn, but, yet, in consequence of wars with the Burmese, Nui had, for more than half a century, closely watched every attempt at settlement there, the usual practice having been to "drive off" the settlers. At this place there was a movement from Chiang Keng in 1880; and about 1885 the 'chie' himself transferred his establishment to the plains of Muang Sing. In 1888 a large expedition from Nui marched against the settlers, but, on the 'chie' taking a sudden alarm,

the new community was allowed to remain in place. At the time of my visit the diplomatic problem was still existing. The British mission from Burma had, the year before, been received by the chief (notwithstanding his oath) as representing the rightful sovereign. At this juncture the Nan officials had been unwilling to interfere, and the Muang Sing chief had resolved to negotiate directly, not with Nan, but with Bangkok.

Arranging to lay out triangles in the direction Luang Prabang, I had to decide on the peaks towards Muang Sing I should ascend. In the official documents from Bangkok stating the object of our work, my name had been entirely omitted, and the Nan officials alleged they could not receive orders from me. As it was evident there would be a great amount of obstruction, I sent Mr. Angus back to Bangkok to procure the necessary rectification, but ultimately it was resolved that the ascent of Doi Tus would be injudicious, and should not be attempted.

It was on the way to Muang Sing that Nau Tet had been murdered, and, as difficulties might again arise, I resolved to proceed thither myself, entrusting to Pitsudi the work of clearing and observing the peaks towards Luang Prabang.



BODHI

CHAPTER XXIX

AMONG THE LAMET IN MUANG LAUNG LUKA

ON January 1 I left Chien, Kawng and after distributing the young Siamese to run traverses and help Pua Sirdi, I started from Chien, Kawng with carriers, accompanied by Mr. W. H. Smiles and Mr. L. Sanan. An excellent road had been cut to Muang Laung Luka for the Nan officials, one of whom, Chao Bin Laung, the son of the late Uparaj of Nan, was with us. After the first march I left the well-cut road and dived into the heavy jungle, following a narrow path over rough country in the direction of a prominent peak I was making for. My friend the Nan official did not like this manoeuvre, so we prepared for trouble ahead. We passed several villages of the Lamet, and their granaries, which have some features of interest. These storehouses, built sometimes as many as twenty or thirty together, and always 2 or 3 miles from human habitation presented the appearance of a silent village. The arrangements for keeping off rats seemed very elaborate. Round the foot of the posts, covering a circle of about 8 inches in diameter, were planted needle-pointed bamboos, round the posts were placed smooth shavings of lumber to make them difficult to climb and, lest this obstruction should be got over, there was a disc of solid wood about a foot in diameter fitted close to the post. It was pleasant to observe that rats and pheasants which were trapped, seemed the only leopards they had to guard against.

At last we emerged from the jungle into an open space, from which the hill I was making for, Palul, was visible but none of our people knew its name, and none of them wished to know. Having asked the Nan officials to encamp at a village, Meksuk on a hill-top from jungle, from which an admirable view was obtained Smiles and I looked about for suitable paths; but on our return we found that the whole camp had moved off. There was nothing to be done but

to follow up and we managed to get the company to go further on.

This was not the best of our difficulties. We were obliged to have officials with us, and we were entirely at their hands. They did not understand the object of our going to the extent of the way in question, and only saw trouble, which they wished to avoid. So they pretended to mistrust our intentions, the police were helping the Khas encouraging them in this. However, finding that we determined to retrace our steps and climb the mountain, on the order being given, not a single transport coolie remained in camp.

The weather was favourable, and Smith and I started off alone. The Chao relented, and sent to tell us to remain at Meksuk, and he would arrange the necessary transport. Beautiful weather was being lost unnecessarily but there was nothing for it. In the evening the Chao came and explained that we were now in the vicinity of the country, the jurisdiction of which was the subject of dispute between Nani and Luang Prabang. He explained that nothing to do with territorial disputes, and that I had to work as much in Luang Prabang as in Nani. He then proposed to provide transport so far as the line he considered the boundary of Luang Prabang. I could only leave myself in his hands. He was drinking and a bottle of whisky from our slender store completely succeeded. I was unaccustomed, the path being very rough, the Chao should not accompany us. Whether the path was fair or rough, his company was not desirable. We found him, like other Siamese officials, only a child. He was not badly disposed but he dealt with him only as two men apparently officials whom I served to the cause of our affairs. They were very insolent, and when I insisted on their being sent away, the Chao himself seemed glad that they had to go.

On January 2, with forty carriers and guides, Smith and I started off. We passed some villages with orange trees bearing more fruit than leaves, and, as the oranges were ripe, it was difficult to keep the men from taking them. The village belonging to Lamets but most of the inhabitants were absent, as being under the administration of Luang Prabang they feared interference by the Nani officials. Another village was hidden away in the deep shade of the jungle, on the outskirts of which was the usual slender frame of a gateway denoting the village entrance. When the guide approached there was such a noise that, for a moment, I thought trouble was brewing, but

it was the way of the people of the appearance of strangers threw them into excitement and fun, and they all spoke together in a language which was not very musical.

We reached the Nam To, at Bait N. Here a couple of streams, bearing numbers of lambs and goats, which belonged to Lamets, on their way to Luang Prabang to dispose of their merchandise. As it was possible that the mules would get away, we made the most of the day, and pushed on till sunset. Here camp we pitched in a very pretty place on the banks of the Nam Sawang, a beautiful clear stream of very cold water. The Lamets as usual were very noisy, but they were a melancholy people, and one seldom saw them laugh. They were heavily built and scantily clad, the cloth they wore being scarcely large enough for its purposes. They carried loads on their backs attached to a plate of curved round thin heads, and when they were ascending a hill each respiration was a low whistle. As they dragged their weary way along the hill slopes the sounds reminded one of the songs of the green dove, so low and melancholy were they. In the lobes of their ears they had discs of wood, some of which were an inch and a quarter in diameter. The test of beauty is the extent to which the lobe of the ear can be expanded, the ear is sometimes slit in the process, but I did not see it in whether or not this disfigurement was considered a social disqualification. The Lamets seemed very stupid, and there was great difficulty in learning their names, so as to make sure that no gift was received in payment. We had with us Kas, under the supervision of Na and of Luang Prabang, as it was amusing to see the efforts made to keep them up to the mark. The Nam To also tried to impress the men, who had mostly sought refuge some years before in Nam territory, that they were Ka Kwen, and superior to the Ka Loo. The term 'Lao' being used as one of contempt, and resented by the inhabitants of Nam and Luang Prabang.

We were now at the foot of the hill, Pail, which I was less anxious of climbing, and very early in the morning we were on the move. The slopes of the hills are usually covered with jungle, though when there is no outlook; but in this particular instance the village path led almost to the top, and, although some of the trees were very heavy, the clearing was soon effected, the little hillmen being quite at home swinging their axes. The views from the hill were splendid, to the south was Pa Yang, which had been cleared by Pa Sudi, and the

two trees left as signals stood prominently out. The villages on the slopes of the hills were numerous and a series of the very large for these parts, consisting of over 200 houses, with in every direction there were traces of former settlements, marking the prospect of clearing the mountains more cheerful. The peaks for the triangulation towards Muang P'bing stood clearly out, and were well peopled.

Smiles started to our traverses north along the village paths keeping pretty well to the watershed of the Nam, which I had to replace my steps, and on many obstructive bends, the men from Nam met Smiles again at Muang Puka. The basket signal was erected and the two signal trees left standing. I executed a chain and compass survey on the way back to Mok Suk, and thence on to Puka using the plane-table wherever there was an opening. This was not very frequently, except near the head of the Mo Ngua and Mo Pi, where the mountains were high and well cultivated. Approaching Puka, I met an interesting colony of Yao, on their way to Chiang Kawnag. Puka had been at one time a town, surrounded by paddy-fields, but these had been left fallow for many years, and the whole place was now a dense jungle. The neighbouring hills were well peopled with Kas, the villages usually being on the tops of the spurs.

In hunting about for a suitable peak, I found that in one place the path had been blocked, and a new path cut for a short distance so as to avoid a tree that had been struck by lightning. This tree was supposed to be in the possession of spirits, but as the new path was in the possession of trees which stung very severely, I preferred the risk of the spirits, much to the annoyance of the guide. About a mile further on another tree had been struck by lightning but with more serious results. The tree was standing in a rice on the hill-slope, and, though the crops generally were rather scanty, the owner abandoned his fields, and did not gather in the harvest, saying it had become the property of the spirits, which on this occasion were represented by numerous small birds, almost too fat to fly.

I selected a hill, Kampawn, which was well wooded, and, in the deep shade near the top pitched my tent among oaks and wild cherries. On the day before leaving the hills I was told my tent had been pitched in a graveyard, and, as the people did not dig deep graves, I was rather astonished that my olfactory sense had not been offended, it was, however, explained that the graveyard had not been

used for four or five years. One of the headmen of the Kas was, as they alleged, seized by a spirit. It was curious to watch him. He had a shivering fit, and seemed to be suffering from a severe attack of colic. I gave him a dose of chloroform, but this did not seem to afford him much relief. Another man set about exorcising the spirit, by repeating prayers and at intervals blowing on the victim. A monotonous chant went on all night. In the morning I took him in hand, administering a very large dose of castor-oil and two large doses of salts, but with little or no effect. However, he eventually got rid of the spirit, and was restored to health. But it was thought I should not have pitched the camp in a graveyard, where there were troublesome spirits, annoyed because I was cutting down the trees.

The Chao Ryaput of Nan came in state to Puka, preceded by men bearing flags, gongs, drums, and old flintlocks, and a bodyguard of about ten men in red shirts with different kinds of breech-loaders. Smiles joined me at Puka, and I immediately made arrangements to go to a prominent hill called Chien, Kung, while Smiles traversed the country to Muang Sai, where we were again to meet. I now took the road to Muang Sing, and when the path crossed the ridge between the Nam Pa and Nam Ma I turned west and followed it. The road was troublesome where it had to be cut through rubbish and creepers growing on abandoned Yao settlements. At last, however, the top was reached, and, as there were no heavy trees, I was encouraged by the prospect of soon clearing the hill. The timber-trees were burnt off. When the hill was cleared, on the morning of February 5, there was a thick haze, and nothing could be seen. But in the afternoon a high wind rose and clouds gathered. The names of all the prominent peaks had the prefix *Chien*, which, I was told, in Siamese meant "high land." Major Germi, however, informs me that the original inhabitants of these countries and their towns were called *Cheng*. Even to day the Kas of the high tablelands of Puan are called "*Ka Cheng*."

The work was delayed by mists, but occasionally I had a glimpse of the surrounding country, and was able to leave the hill on February 12. I had also cleared a peak 200 feet lower, and distant about three quarters of a mile, which had obstructed the view of Kun-town. Leaving a signal-tree, I moved on to Dao Wa. The slopes of the hills all round were peopled by Yao, & none of the villages consisted of 200 houses. I had an amusing hour with many of the inhabitants,

who were in most beautiful specimens of silk and to put with some of them pieces, which were formerly Chinese and could be seen by my eyes. Among them was a silversmith who was very proud of his work as I believed to be very right to be, judging from the bracelets and rings which he sold me. A great number of these Yodens from Muang Li, which they had abandoned after the French occupation to move over and settle in Muang Sing.



from A. M. S. M. S. M. S.

CHAPTER XXX

THE ANTIEN SETTLEMENTS IN THE MUANG SING PLAIN.

ON February 1st I met Chao Bun Luang at Ta Muang Nung. Climbing to the tops of hills was not to his taste nor did I desire his company. But when, even in his absence I was detained in the hills, I was still at his mercy, for I had to look to him for rice supplies, and he never lost an opportunity of exercising pressure.

I had wished to make observations from a number of other hills, but the season was now far advanced, and delay might have made it impossible for me to determine the position of Muang Sing. I therefore pressed forward through the thick haze, and crossing a very low pass, descended to the wide plain of Sing, watered by several streams which find their way to the Nam Ou. Approaching the settlement, I met some headmen of the Yao, who wore metal buttons bearing the Queen's head and an inscription, "Victoria Queen." I drew one man's attention to the stamp, and he seemed to understand what it represented. The buttons seemed to me, at the time, to be silver gilt coins of the value of an eighth of a rupee; but I did not examine them closely, and I afterwards found on my return, at Haass, exposed for sale in the market at Nawaing Ka. Muang Sing was about 1000 yards square, surrounded by a mud wall and ditch, and everything about the place had a new appearance. The governor's house was in the centre, encircled by a strong palisade. The streets were divided into quarters, each quarter being under the command of an official. On the plain, which was from 1 to 2 miles long and 4 to 6 broad, there were villages of settlers from the surrounding districts. In seven villages the settlers were from the province of Chien Tung, and in eight villages from Muang Huan and Muang Han of Sibsaung Puna. The plain is capable of great development, and might support thousands.

I pitched my tent on the grounds of a wat near the eastern

entrance, and visited the governor, a good man about sixty years of age, and uncle to the Chief of Chieng Tung. He did not like the idea of his little state being broken up and put to be under Siam and the other under Burma. To the west of Sing are peaks some 7000 feet high, overlooking the Nam Kawng, which in direct line is not far off.

On the mountains are interesting and peculiar tales, called Akis. They come down to Sing for the market, which is held here as in most small places all over the north of Siam, every fifth day of the week. Over the plain were many camps of Chinese traders. These men went no further than Sing, and when they had got together a sufficient quantity of raw cotton, they returned to Yunnan by way of Chieng Rung, which is eight days' journey.

Finding a place that could be fixed by interpolation, I connected it by means of a rigorous traverse with a point just outside the eastern gateway, where observations were taken of latitude and azimuth. Later on I went out to meet the Chao Ra up to Nan, who advanced in semi-state with ponderous looking elephants and a good deal of drumming and gong beating. But the Chao did not go out to receive him. The Chao solved the difficulty by calling on the chief, and I have no doubt that two were the best of men.

It was high time for me to be on the move. I had brought with me thirty miliamen of Nan, and I now kept only nine, paying off the others. On February 23, 1892, a very hazy day, I started for Pubokat. Our men followed the usual caravan route across the plain, but at the pass, which rises only a few hundred feet, it left the caravan track and struck in an easterly direction along the ridge. The pass was of some importance, as it was in the boundary-line of Sbsawng Pana, Nan, and Sing. As we passed along the ridge we had glimpses of Muang Man, and of the peaks of Muang Pang in the valley. Having reached the peak Pubokat, I had it cleared of trees, but the haze was dense, and nothing could be seen. On a large tree Chao Bun Luang placed an inscription commemorating our visit, and calling the tree a boundary-tree.

I now pushed on to Muang Luang Puka, travelling along the bank of the Nam Dung. The path was rough, and under water until near its junction with the Nam Ta, we left the stream. Here we found an abandoned Lanton village and some fresh graves, the people all having moved off to the Muang Sing administration. Leaving the Nam

Ta to the right, the path on La-bad one ascended hills with extensive clearings for cultivation, and passed through large villages of Lanten, who had great bales of cotton ready for transport to Muang Sing. They had an ingenious contrivance for applying water-power to pound paddy and separate the husk from the rice. In other places paddy is usually pounded by two or three girls standing on one end of the beam, to the other end of which is attached a heavy wooden mallet, a regular see-saw being kept up. Here the place of the girls was taken by a box which filled with water and descended. The bottom of the box worked on a hinge which opened inwards, and when the box reached a post fixed in the ground, the bottom was pushed up. The water thus escaped, and the box rose to its original position to be filled again.

Near Muang Luang Puka I met a caravan of about fifty ponies, carrying raw cotton by way of Muang La to Muang Ku in Yunnan. The leader wished to know if he could go to Muang Sing by the road I had come. I explained that one part was difficult for laden ponies to pass, but he thought he would make the venture next season. We reached the Nam Ta at its junction with the Nam Trung at the head of which were salt-wells. Strange to say, they were under the jurisdiction of Muang La. The boundary of S'ha-wang Pann crossed the watershed, and took in a triangular area well covering the salt region. Passing over the Nam Ta, we found ourselves on the open plain of Muang Luang Puka, which is not so extensive as Muang Sing but is nevertheless fertile, and well suited for rice cultivation. It was sixty or seventy years since the plain had been cultivated; and the Chief of Nan had started a new colony. The settlers were arriving every day, and they took up their abode in some grass sheds to the south of the plain. The Chinese traders brought down iron in the rough, and copper vessels, which they exchanged for cotton. It was very hazy, and I was able to fix the position only by observation for latitude and azimuth to a fixed peak, the longitude being checked by the traverse.

On February 29 I set out from Muang Luang Puka for Muang Sai. After passing through some Lanten villages, where tobacco, indigo, opium, corn, and hillside rice were cultivated, we crossed the ridge which separated the waters that drained down into the plain of Muang Luang Puka, and marked the limit of the Lanten settlements. There the Kamus had made extensive clearings on slopes so steep that it

seemed surprising the ruins, which to be sure it did not wash away the grain as it was sown. To the east was the mountain Dong Wung, covered with thick forest, but I was informed that the Yaks had already settled on it, and no doubt before many years pass the whole will be cleared. At the mouth of the river there is a village Pak-Hum, where there are Khmurs, who have a *vat*, and are priests. Following the path over rough country, we came to the Nam Ta, there being a ford just below the mouth of the Nam Se.

As we were in the Luang Prabang territory, the Nam officials wished to send the carriers back. As I would not have the money to pay them until I met Luang Pa Wat Sa Lin, who was coming from Sai, it was necessary to keep them for two days, and to this course the officials, after some altercation, agreed.

The boundary of Luang Prabang and Nam was along the Nam Ta from the Nam Se. It then recrossed the Nam Ta, and followed a line which had always been disputed between Nam and Luang Prabang. Nam asserted its claim to the Nam Ta, while Luang Prabang on the other hand, affirmed that the present of Nam in the valley of the Nam Ta was an encroachment.

The route passed over low hills, and in whatever direction one looked there were evidences of extensive cultivation. We went through villages peopled by settlers from Sibsawng Panna and Sil Tawng Chu Tai, and the inhabitants seemed to be very numerous. Numbers of men passed us carrying salt in the form of bricks, about 9 inches by 3 by 2½. The salt appeared very good, and was brought from Baw Luang and Baw He.

On March 4 I made a traverse of 7 miles, an exceptional length; but the path was easy, and I was all day at it. The distances were very close, and, on account of the jungle, the readings of the compass were necessarily numerous, taking up much time. I encamped at Pa Pung (the Beehive Rock), which is a conspicuous limestone rock 200 feet high at the junction of the road from Muang La of Sibsawng Panna. Not far off were Khmurs, working at the lead mine.

The first European that ever entered Sibsawng Panna was the late General McCleod, who was in Chiang Hung in 1855, having been sent there from Maulmein by the Indian Government to inquire into the facilities for trade. Forty years ago the condition of the country was pretty much the same as now. Anueli prevailed, and the

chief had been obliged to flee from Chieng Rung to some place in the direction of Sino. The chiefs were supported by Ava and China, but since the trouble at Mandalay Ava had all its share of confusion though not so much as the other Sino states, owing to its proximity to China. The Mo Kung as a boundary between rival states, even at that time caused a dispute. General McLeod writes: "The Burmese next nominated Chin 'Thi Wu's second son, Maha Wang. These two chiefs, namely, Maha Noi and Maha Wang, ruled at the same time, one on the left bank and the other on the right bank of Mo Khong, but this rule was not peaceful, there was constant warfare carried on between them, and though Maha Noi obtained the assistance of Luang Prabang and Muang Nan, Maha Wang proved successful. During the hostilities above spoken of neither the Chinese nor Burmese aided either party. On the disappearance of Maha Noi, the Chinese confirmed Maha Wang."

In another place General McLeod wrote: "The court of Ava supported Maha Wang's son, and the Chinese did so also."

Thus all shows that Ava and China were the only countries concerned in the Sibsawng Pan. It also shows the close relations between Chieng Tung and Chieng Rung, which have become closer up to the present day, so that the interests of one are involved with those of the other.

General McLeod wrote "It is not likely that the Tsong of Kien, Tong especially (whose daughter is betrothed to Maha Wang's son), and those of Kuang Khong and Muang Klong would give their countenance to the existing state of affairs by the presence here of their officers. These officers attend all the deliberations which take place, and watch whatever is passing."

It is not easy to ascertain what were the twelve states of Sibsawng Pan. The titles of Shans living there are known by the name of Lu, and excellent fellows they are. Originally there must have been twelve divisions, the chiefs of all residing at the capital, Chieng Rung, or Alavo, on the Nam Kawn. One difficulty arises from the frequent use of Muang La, which has several intonations, meaning different places.

On the Nam U, the eastern watershed of which is the boundary between Sibsawng Pan and Sibsawng Chu Tai, the northern watershed being the boundary between China and Sibsawng Pan are U, comprising U Nua and U Tai, where salt is collected and

Chiang Tong—this list comprises the districts of the level of the Nam U, in which are the famous terraces of Chiang and Wu. The gardens are entirely under the management of Chinese, who are governed by officials elected by themselves. The Laos have their own governors, who hold their commissions from the Chief of Chiang Rung. On the east of the Mo Kawng, there are five states—La Nua, La Tai, Pong, Hing and Chiang Kong and U. La Tai is near Muang Sing, and the district is famous for its salt wells. The best well is called Baw Ho, and the salt is only about 10 feet below the surface.

On the west of the Mo Kawng are several states—Har and Ling, Wang and Pong, Pan and Chiang Lo, Nong and Ong, Che Mang, Long. The capital, Chiang Pong, or Alue, has jurisdiction east and west of the Mo Kawng; the western divisions being Kon, Ham, and Han, the eastern divisions Nam and Wen.

I met Luang Pu Wit Si'an, who brought with him money, and enabled me to pay off the carriers from the Nam district in Siam. He also turned up, connecting his traverse from Siam with mine. We pushed on and encamped at Ban Kaw Noi. The path was in every one, and much used, passing over hills, with settlements of Moo, Yao, and Kham in every direction. We met a number of ponies and mules, laden with raw cotton, on their way to Yunnan. At this village there was a garrison station. Whatever may be said of the administration of Luang Pibang, the people certainly enjoyed a sense of security foreign to their eight years before, and out of this the commissioner had established systematic order, which was evident throughout the province. It was said the people were over-taxed. I understood there was a poll tax of four ripsos on all adult males, and no other taxes, and, while trade, labor and gambling were abolished, the consumption of opium and spirits was being controlled.



BUDDHA

CHAPTER XXXI.

WORK ROUND MUANG SAI.

ON March 7, about 8 a.m., we marched into Muang Sai and took up our quarters in a vat on a small hill, cool and well protected from the glare. I received a letter from P'ia Rithirong, the Commissioner of Luang Prabang, and one from the old Chao Rajawong, now the Chief of Luang Prabang, both letters being very kind. The Chao was an old friend of mine.

I had the pleasure of knowing P'ia Rithirong shortly after joining the Siamese service, when he was closely connected with P'ia Surasak in the formation and re-organization of an army.

A slight amount of friction between us in these days had led me to anticipate some opposition when working in the boundary now under his administration, and I had therefore written to him from Chiang Mai. The result was a most agreeable surprise. The assistance and kindly consideration which I experienced at his hands exceeded all that I had met with in Siam. Everywhere in his province I received the same encouragement, and my work became a pleasure such as it had not been for many years. The mail also came in neatly picked by the postal authorities of Luang Prabang.

Smiles had cleared a conspicuous hill to the north, and filled in the details of work round Sai, to the south-east, overlooking the rice-plain, was another sharp peak, Hipi, which I ascended and cleared. The rice-fields of Muang Sai were convenient for the measurement of a base line of about a mile in length, and this Smiles measured very carefully. It was necessary to connect Sai with the triangulation which was being carried to Luang Prabang, but the haze was very thick, and even on favourable days a distance of about 4 miles was all that one could see. The time was occupied in cutting lines, and unsuccessful attempts were made for stars. One night

when the stars were twinkling only a mile or at right to take observations; but there was a perfect plague of insects, which the men believed were spirits determined to prevent the men carrying on the work. I had a small cleared off jungle and discovered a pagoda, the existence of which had been unsuspected.

Muang Sa' is remarkable for the excellence of its mineral, a small hill called Lu Lek ('the non hill') in the neighbourhood is said to be nothing but iron. Further down the river, below its junction with the Nam Pok, is Muang La where large quantities of salt are procured. The salt-fields are in the bed of the river, and, of course, can be worked only in the dry season. The salt appears as an efflorescence, and the surface earth, gently scraped off, is carried in baskets to bamboo shells, where it is thrown into brick-and-mortar tanks. Water being poured in, the brine runs off by a bamboo tube through the bottom of each tank, and passes into a trench cut in the ground, and rendered impervious to water by being plastered with clay. From this trench bamboos are filled, each bamboo vessel being simply a tube closed at one end by the knot. For the purpose of evaporation these vessels are placed over a brick furnace about 5 feet long, 2 feet deep, and 1 foot broad, the bottom being inclined at an angle of about 15° . They are arranged side by side along the whole length, and the firewood is piled up at one end only. One furnace produced in one day about 100 pounds of salt, which was sold in Luang Prabang for three rupias. The water issuing from the tanks is tasted occasionally, and when it is thus ascertained that all the salt has been extracted from the earth the tanks are emptied and the earth spread over the river-bed, to become again impregnated. Muang La sent to Luang Prabang 300 pounds of salt as the annual tax for the privilege of working the salt-beds.

Muang La is on the Nam Pok, at the source of which is Doi Lakhon, on which stone pillars were supposed to have been erected, marking the boundary between Sipsong Panna and Luang Prabang. It was said that these pillars had been removed by the La' that they might with greater boldness cross the watershed.

Lead and silver were brought from the mountains and evidently there was something more in the appellation of Muang Ngum (Silver Town) than a mere name. The hill is 4 or 5 miles from the town and the road to the salt-wells passes directly over it. I sent some Siamese assistants to make a more detailed examination of the place.

The towns, which eight years previously were deserted were now peopled by settlers from Sibsaung Pan.

On March 22 I left Sai, and on my way met a little girl about five years old toddling about alone. The little thing seemed hungry. I gave her a meal of rice and plantains, and then had her face washed in the stream, to which process she objected strongly. I brought her on to Ban Nahuang, giving her over to the care of the head man, with twenty rupees. Her parents, who were Meo, whilst moving from one village to another, had abandoned the little thing which seemed to be an idiot. It is very likely the poor mother had fallen ill, and being unable to carry the child farther, had left it on a much-frequented road, to be brought on by any passer-by, meaning, I have no doubt, to seek it again in better times.

Smiles followed the route to Muang Nga with a careful traverse, which he connected with a conspicuous peak near the town. On this peak he erected a signal basket. I followed the route towards Muang Ben, and at the point where the path crossed the watershed of the Nam U, I struck along the ridge and ascended the peak Nawn Chang, which was visible from Muang Sai. On March 24 I went on, and there was a chance of the impenetrable haze being cleared away. About 2 miles to the south-east was a ridge, somewhat higher than Nawn Chang, shutting out the view. I cleared the southern extremity, but as Sai was not visible from it, both peaks were used in our operations.

On one occasion, whilst returning from the south-east peak to the camp, I was overtaken by a heavy shower, and in the darkness missed the path. Passing through a Meo village, I came to a large house, where men, women, and children were huddled together in great numbers. They were surprised and alarmed by my visit, but, as they knew the whereabouts of the camp, I soon persuaded one of them to show me the path. In a short time I found the way again, and although drenched to the skin I reached the camp in excellent spirits, feeling certain that the haze would blow off, and I should be able to carry the work to a satisfactory conclusion.

On March 28 beautifully clear weather began, by the 30th I had finished taking observations on Ki Nang, the south-east peak. On this peak was a structure which seemed to be the tomb of a Meo, but the Meo repudiated the idea of a tomb being there, and I regret that my curiosity did not lead me to a closer examination of it.

There was a very fine peak to the south (Parat) distant about 5 miles, which had to be cleared. Of course nobody knew anything about it, but as, with the people before me, I did not wish to reverse my steps I pushed on following the "divide" between Num Nung and Num Ben. The question of supplies was an anxious one, as it is in the distance I could see some Yao villages, and perceived traces of many others, I decided to keep to the 'divide'. It was well I did so, for after travelling 5 or 6 miles I found myself in the midst of prosperous Yao villages, with ponies, cows, goats, and I struck an excellent path leading in the direction of the peak I wished to ascend. On the way I met a jolly Yao bullock-driver, who "whistled as he went for want of thought," driving his solitary bullock before him. Hearing him, my guide whipped out of his bag a Jews-harp in order, to my amusement to show that he was not behind the Yao in musical talent. I had little thought to hear the Jews-harp there, and the guide's bag was the last place in which I should have looked for one.

I came to a halt, and entered into negotiations with some Yao for guidance to Parat, which was within sight. On its slopes I could distinguish old clearings, so that I was sure they must know available paths. I also advanced money for the purchase of rice to be delivered to me on the mountain. I had no reason to regret the confidence I placed in the men for the rice was duly and faithfully delivered. We moved on in a heavy shower, and passed the sites of some abandoned villages, but though we had completed a long day's march we were not near the peak. The next morning heavy clouds and mist hung about, and I could not be at all sure of the whereabouts of the peak, although I knew it was not far off. Of course, the Yao said there was no higher summit than the one we were on and they wished to return to sick relatives at home, so I let them go. I gave directions for the camp to be pitched near water, and with two or three men started reconnoitring. I had not gone far when I was satisfied we were not on the highest point, where I returned to camp. In the evening I had found the peak, and the next morning we all moved up. Having pitched our tents near the top, we began cutting the trees, which were of enormous growth, and covered a considerable space, the top being a broad flat of upwards of 200 feet square. On one of the trees there were evidences of recent ravages by a bear on a beehive in the hollow of the tree, the bear, by means of his claws and teeth, had torn the wood asunder and got at the hive.

April 8 was a glorious morning, and the hill, cleared of all the trees, afforded a magnificent view. I felt the greatest possible pleasure as I traced, one after the other, the points of triangulation laid out to Luang Prabang by P'ia Sinsidi. There were ten prominent peaks, each with its signal-trees and basket-signal, even to the highest limestone cliff overlooking Luang Prabang. It was splendid work, which had involved great hardships and labour, the observations had been intelligently and carefully made, some of the points having required three visits on account of the dense haze. A great number of points had been laid down, and the plane-table reconnaissance neatly performed.

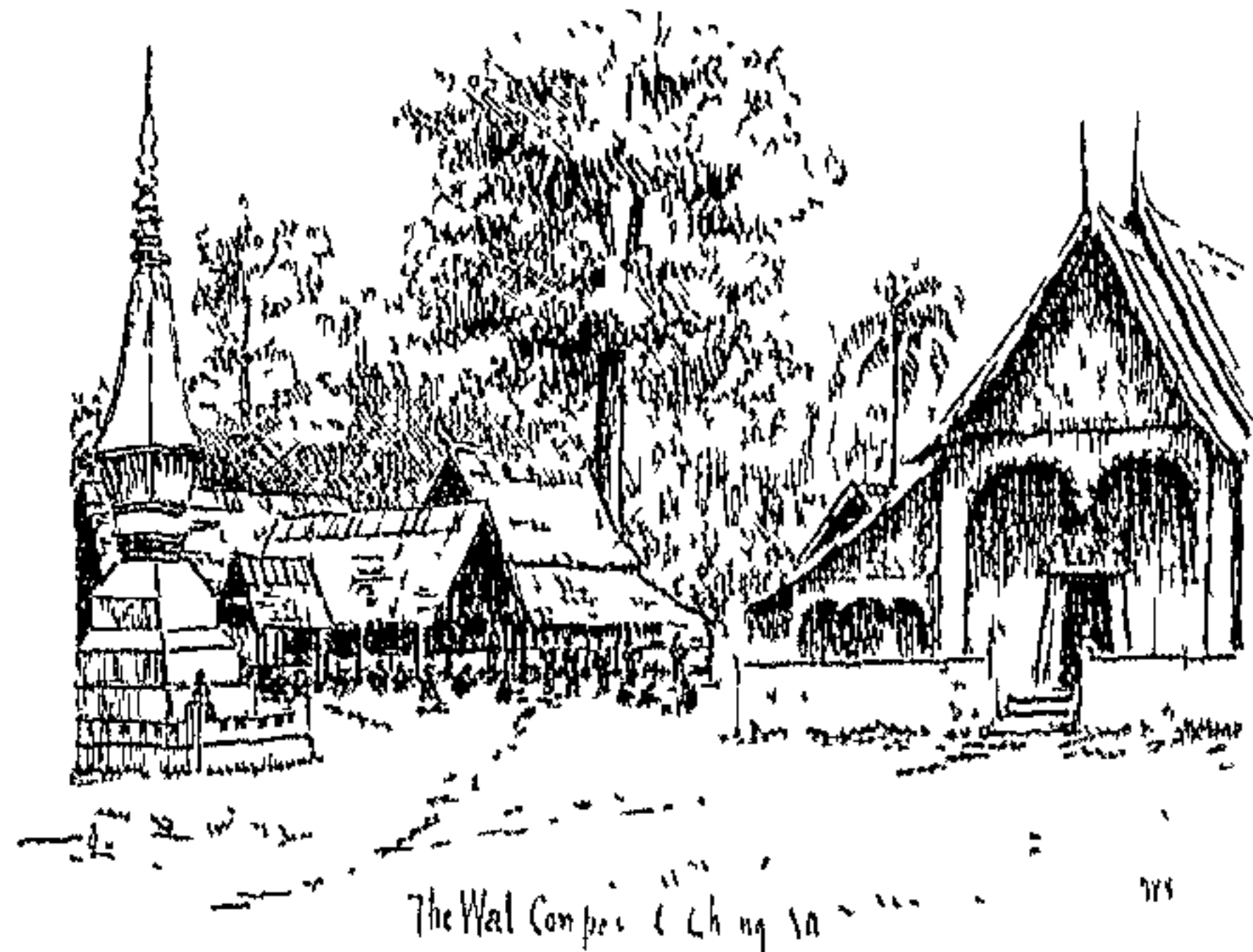
The course of the Nam U could be traced by its numerous pinnacles of limestone crag, notably Pa Sang, which rose to a height of 6110 feet above sea-level. Pa Kai Taw, near the Nam Kan, which has a similar reputation in Luang Prabang to that which Chiang Dao has in Chiangmai, stood out like a needle, the top being 7360 feet above sea level. But it was to be incontestably proved that this peak, like its compeer, must resign its claim to be the highest mountain.

The work on Parat being completed, two signal trees were left standing, one of which was over 70 feet high. Some of the Kammu had fallen ill, and this was attributed to the mountain-spirit seated on that tree and brooding disconsolately over the loss of all the other trees. To propitiate this spirit a fowl had to be procured for sacrifice, otherwise the men would have made up their minds to die.

Being unable to see the hill that Smiles had cleared, and on which he had erected signals and closed a traverse, I was obliged to clear another hill from which it was visible, and which connected it with Kinang. There were numerous mushrooms on the path, affording much amusement to the men, who busied themselves in collecting them. My provisions were running short, and by the aid of the ever-ready Yao we struck a path which led to Muang Nga. My little exterior added to our difficulties by giving birth to a small family, for the bringing up of which elaborate arrangements had to be made. Thunderstorms now became frequent. When we struck the Nam Se, a tributary of the Nam Nga, we fell in with Kammu settlements, and the Yao returned to the mountains, as they felt the heat of the low valleys.

On April 12 we reached Muang Nga, where there were some nice

fields, though the people began to clear the mountain-side cultivation. I paid for the morning in Muang Sa, and the next day in a small boat, went down the Nam Ngum. At some points on the river, as my guide told me attempts were made to find salt, and traces of it were discovered. In the interior of the country near the sea, a bed of salt is a great treasure, and salt lakes are well known.



The Wat Complex at Chiang Mai

CHAPTER XXXII.

LUANG PRA LANG REVISITED

At Ban Sob Ya there was a very shady spot inviting us to rest, but the headmen of the village were apprehensive of my interference with the spirits, as the village cemetery was in the bamboo clumps hard by. Then custom was to cast the dead bodies of the poorer portion of the population into a ravine, whence, during heavy rains, they were carried down into the rivers. At the junction of the Me Ngao with the Me Nga I waited for the carriers. Of these two streams the Me Ngao is the larger, and the course of the river formed by the union of the two is but a continuation of that of the Me Ngao, yet the united stream is called the Me Nga, this name being given to it probably on account of the town of Muang Nga.

When the carriers came we ascended a hill, Pa Lai. The path was through a jungle of high grass, and as the heat was intense, without a breath of air, the atmosphere was suffocating. Pa Lai, cleared of trees, was made an interpolated point. From one of Pui Sinsich's points it was necessary that observations should be taken for Puat, the better to connect the work. The hill I decided on ascending was Nang Wang, across the Nam Kawng, overlooking Luang Pra Lang. Following a Kham path through extensive clearings, we came to the village of Ta Talat on the Nam Kawng. The different villages with names having the prefix Lat (Siamese Talat) were market-places in the good old days. The Nam Kawng at Ta Talat has a broad bed, but in the dry season the water flows in a narrow channel, dashing along over enormous rocks glistening like coal. The colour of the rocks is due to a deposit which in different parts of the Me Kawng assumes different hues, at one time black, at another various shades of green, then red. What the secret of the colouring is it is difficult to say, as the rocks are all of the same nature.

I ascended Nang W^{an}, and arrived just in time to have my tent pitched before there was a great down-pour of rain. During the night there was a heavy storm, with thunder and lightning. The rain flowed like a stream through my tent, which was kept with difficulty from being blown over, and the cracking of the trees was not cheerful, but I was glad to think of the "clear shining after rain." The next day was rainy, and in the night we had another storm, but not like the first, and I was better prepared for it.

On April 20 I had hoped to get a good view, but the inhabitants, anxious about rice cleanings, had begun burning the old trees cut some months previously, and kept the fires up night and day. However, Parat and other points were connected, and I was only anxious to connect Nawn Chang and Kinang, to make the work more finished.

The basket-signal was in excellent condition, for the pole, the trunk of a tree, had been let into the ground some 10 or 12 feet. It was good, labour replacing it, but it will stand for twenty years.

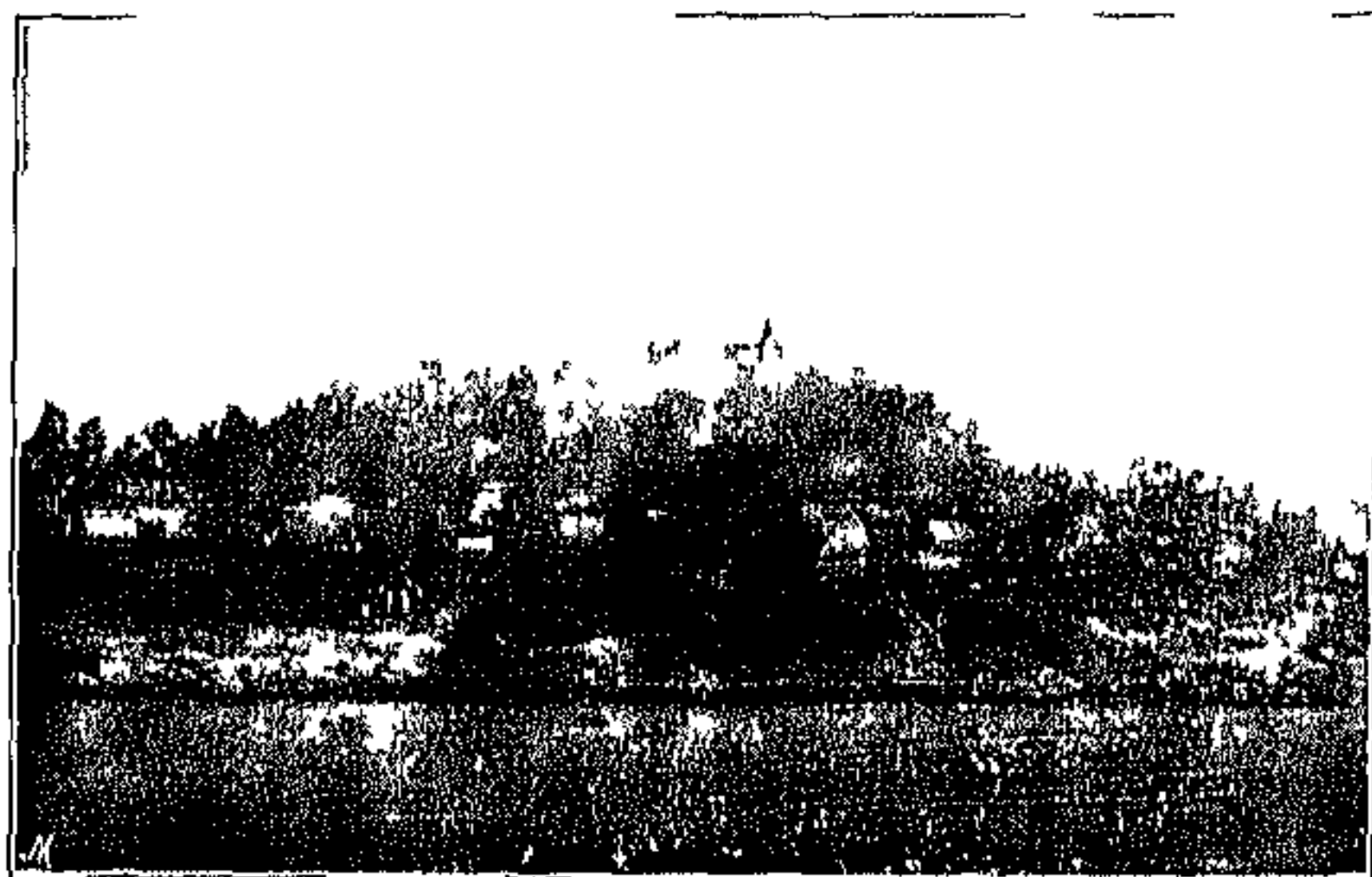
On this mountain we found that the beetle called the horn-beetle (*enopliatris*), specimens of which the late Mr. Bates was anxious to secure, was very plentiful. The men amused themselves in the evenings by catching these insects. The species was discovered in Burma, not very long ago, by an Indian naturalist, Sigra Ta. Being numerous, and dung feeders, I wondered where they could come from, and was informed that rhinoceroses were plentiful on the hill, though I did not come across any traces of them.

In a clear afternoon Luang Prabang stood out distinctly. At evening the pagoda spires and the gilded mouldings of the walls glancing in the light of the setting sun, added their effect to that of the natural features of the landscape—the hills and plains and the noble river—and caused in me a feeling of irresistible melancholy. Since my visit in February 1887 Luang Prabang had passed through much suffering. It had been ravaged by the Haws; its people had been pillaged and murdered or driven from their homes, and the old chief had only been rescued by his sons forcing him to a place of safety. The town seemed doomed to suffer, for within two months last past it had been again burned, and, more recently still, about 500 of its inhabitants had died of an epidemic sickness.

On April 28 I went to Luang Prabang, and while waiting for a

boat to cross over had time to note the changes. Near me on the right bank of the river was a large wooden building painted in red and blue, and a bamboo fence enclosing a large area, in which were several houses. This was the French Vice-Consulate, built after the treaty negotiated with Siam had been signed, but not ratified by the French Chamber.

Across the river, the quarters where the chiefs, the Siamese commissioners, and the bulk of the people lived, had a new look. The pagoda on the hill, Wat Chawn Si, had an old appearance, and while I was looking at it the familiar gongs and drums had by rang out their harmonies, indicating a change of watch. Night and day, at regular intervals of three hours, the watches have been marked in this way for ages, and it was pleasing to see one custom at least that had been clung to in spite of all changes. The small hill, 200 feet



AT LUANG PRABANG

high, had not altered much in appearance, except perhaps that there was more jungle, and the old Chinese looking *salus* were, if anything, going fast to decay.

In the direction of the old chief's house was a massive brick building not completed. There were also the usual thatch-roofed houses, but they were new, erected since the recent fires. At one time the ground had been covered with a mass of cocoa-nut and areca palms, which were all cut down. There had been some attempts at street-making, and immediately opposite, at the distance of 770 feet

for the luck on which I stood, was an excellent landing-place, beyond which a good stream led to the Chinese quarter. On the side of the stream was a post office, with a signboard bearing large letters in Chinese and English.

I was glad to see Prit Srisdi and congratulated him on the excellence of the work he had done. I took advantage of the opportunity of visiting Prit Srisdi and thanking him for the kind assistance he had given to make the work successful. Across the Mo Kwang I took up my residence in very comfortable quarters which had been built for a school. The "house" was of concrete, and the sides and roof were of bamboo, neatly painted white, while the posts were yellow. The columns were obtained in Luang Prabang, white, yellow ochre, cobalt, and mineral reds being plentiful.

The commissioner had been good enough to provide all of us with excellent accommodation. Smiles, who had arrived seven days before me, was looking well and all the young Siamese assistants were doing well. We called and saw the old king, who was very feeble. We also visited the Cho Luang (new chief), who looked old and remarked that I looked old. We were glad to see him, he seemed the same good natured quiet man as ever. Returning to my comfortable quarters I made arrangements for the observation of latitude and azimuth at the golden pagoda, on the summit of Wat Chuan Si. There was great satisfaction in finding that the position of Luang Prabang was now connected with the Indian triangulation. The connection may have been effected by a rough-and-ready method, and not geodetic, but the country through which it was run was very rough, and I leave the results to the future, confident that when precise tests are applied there will be no improvement.

Smiles prepared and measured a base-line over 2 miles long, which was only 2 inches different from the value brought down by triangulation.

We called on Dr. Missie and Mr. Cahill, and found them very interesting. Dr. Missie was an enthusiastic geologist.

An opening now offered itself for the improvement of Prit Srisdi's prospects, and though I was sorry to lose his assistance in the work, I was unwilling to stand in the way of the young man's promotion. With regret, therefore, I allowed him to return to Bangkok, when, on account of his hard and faithful work, he was appointed secretary in the Ministry of the Interior, and received the title of Prit Srisdi,

besides being decorated with a commandership of the Crown. I was informed that I was to be recalled to Bangkok, but this statement seemed improbable, considering the orders I had with me. Kias with the great seal for the Chief Commissioners of Chiang Mai, Luang Prabang, Nang Kai, Basse, and Putumbang, and Kias with the small seal for my own personal use. The wording of all of them was presumed to be the same, and the following was the substance—

“The Minister of the North to the commissioners, governors, and petty officials of provinces

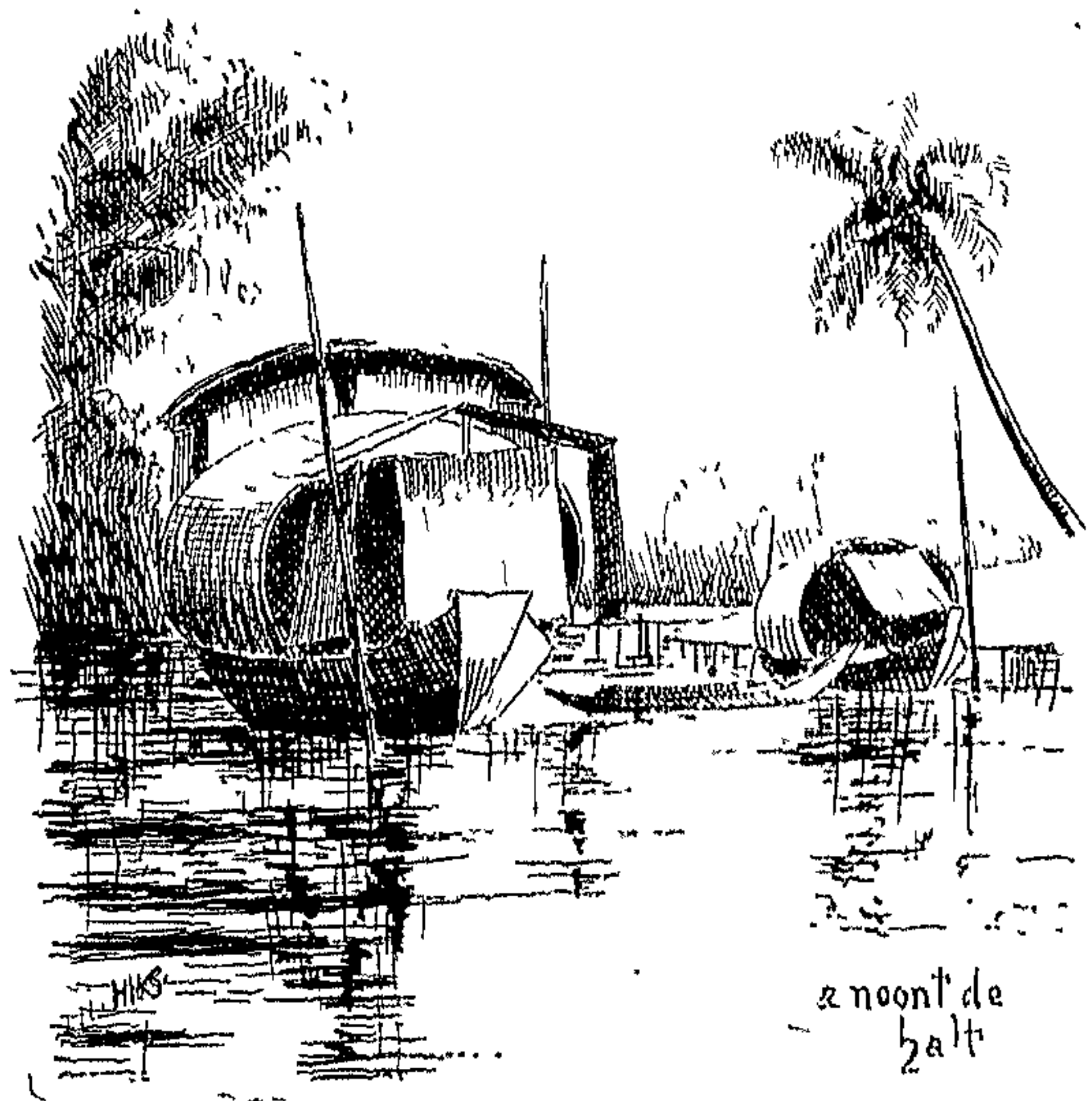
“Royal commands have been received that survey officers must proceed to the boundary, and must make surveys in the following provinces—Nakawn Sawan, Pitsanulok, Pichai, Tak, Chiang Mai, Tern, Lakawn Lampang Nan, Luang Prabang, Nang Kai, Puan, Nakawn, Chumpasak, Ubon Ratchatani, Putabawng, Nakawnrat-chasima, Sakon-Nakawn, Nakawn Patom Ta Uten, and all the smaller provinces along the frontier under the jurisdiction of the Ministry of the Interior. When the survey officers arrive let all the officials give every assistance in procuring transport, labour, and provisions, and as the survey officers have been provided with funds for the prosecution of the surveys, let everything be paid for according to the custom of the country, with the exception of provisions for menials. Let these be provided by the Government.”

The order covered a great deal of ground, I had not half performed my task, and could not very well return without the special instructions for which I was waiting. We occupied our time in preparing the computations of the work, and as I was feeling somewhat indisposed, we went up Pu Kum Kao, a splendid hill overlooking Luang Prabang. I remained there for a week, and though it rained nearly the whole time, the atmosphere was very pure, and one felt the better for the change.

The Chao Luang and the commissioner came up and stayed for a few days. It was a great undertaking for the Chao Luang, who is no light weight, but I think he enjoyed himself, and as he could ascend the hill without the exertion of walking would go there frequently. I suggested to him to have a road made to Kum Kao Nai, which could easily be constructed, and then he could ride a pony to the top, where he might erect houses, and every year take a change, together with the old chief.

When we returned to Luang Prabang, the Mo Kawng was a

magnificent sight. It was full to the brims, having risen more than 50 feet above low-water mark. The water was red, and the people were out in boats catching the drift wood, which was coming in every direction. The Nam Kun was also full and near the mouth there was no flow, the water being backed up by the Nam Kawng, which rushed madly past.



CHAPTER XXXIII

THE HIGHEST PEAKS OF INDO CHINA

Our stay in Luang Prabang was not unpleasant. The commissioner, P. de Rhidnong, did everything that was possible to make our recess agreeable.

We had our festive gatherings. May 21, the Queen's birthday, brought the Siamese commissioner, Dr. Massie, and M. Civilion together.

On July 13 the French Consulate was profusely decorated, and the three or four days following were given up to festive rejoicings on account of a coronation ceremony in connection with the chief. On September 20, 21, and 22, the King's birthday was celebrated. At this *fête* the commissioner, a man of great taste, surpassed himself. The whole of Luang Prabang was finely decorated and illuminated and a handsome wooden building, just completed, was converted into a reception hall. It was thronged with people, who crowded in to see a painting of the King much to the annoyance of Dr. Massie, who was constantly asking if it was a "divinity."

Dr. Massie's manner was brusque, but he had a kindly disposition. In his geological researches on Phu Sai, near Luang Prabang, he found coal, and said, besides, he was on the traces of salt-field. His pockets were always full of fossils of the reptile and fish period. He also collected a great number of *ultra*s some of them very beautiful, but he unnecessarily exposed himself to danger and in his geological excursions often got soaking wet, without taking the slightest precautions to avoid fever. For eight years he had travelled over Indo-China in the same way, and had never known a day's illness. In such cases an attack of fever is usually very severe, and so it was with him, for the first seizure carried him off. He was on his way to Saigon when overtaken with illness. At Nakawn Panom he met

some Roman Catholic missionaries, who anxiously pressed him to remain among them till he should be sufficiently recovered to proceed, but though his condition then was such that he resembled a living corpse, he held on his way and died soon after, in descending the river.

We however, had to think of continuing our work, as the rainy season ends at about the first week in October. The commissioner promptly came to our assistance with transport coolies. We were to pay each man one tical a month, and feed them in rice, salt and chillies. The rice was the difficult part, for storehouses had to be made at intervals, and as the men ate only as much as they could it took some time to get the rice together.

Each Siamese had fourteen carriers for heavy man-lung order, with a full complement of supplies. I had fifty men, and Smiles the same number, each man carrying on two or clearing the hill-tops. Thus, fully equipped, we took leave of our friends at Faang Prabang and started on October 7, the commissioner and the sons of the old chief seeing us off.

The week before we left it had been raining very heavily. The Nam Pu was flooded, and not easily forded, so that the little Khamu coolies had difficulty in crossing. I made them all join hands and ford the river at one of the rapids, the water being nearly high. The force of the stream was great, and nearly all the baggage was wet. The only things kept dry were those carried on the heads of men, and held there by other men. Our route lay along the same path that Pua Pichai had taken with 200 men to Tung Chien, Kun some years before. The road was exactly as it had been then, and followed the wandering course of the Mo Pu, which has on each side picturesque limestone cliffs. The scenery was very beautiful, but the constant crossings of the stream (no much involving over twenty) detracted somewhat from the pleasure of observation.

The path led over a mountain called Pu Heng, which we cleared and on which we left two signal-trees, besides a large basket-sign, which will last for years. Until the afternoon the tops of all the high mountains were enveloped in clouds, and made an unfavorable impression. When Pu Heng had been cleared, we found that we had somewhat overshot the mark, and had to retrace our steps and ascend a hill called Pu Kai Taw, which blocked the view. This last gave a great deal more trouble than we had anticipated. Very soon,

limestone crags cropped out above the surface in all directions, and water was very scarce. Our Meo guide was not at a loss for a drink, he cut a bamboo, and with a hollow reed sucked out the water, he then turned the bamboo into a pipe, and, while resting, enjoyed his smoke. On the top of the hill were very large trees, which, on account of the difficulty of getting a footing among the crags, were not easily cut down. In this region it is not unusual to find amboos, plantains, and oaks growing together. One interesting feature was that wild cattle and pigs seemed plentiful, and also the beautiful silver pheasant.

After finishing the work on this peak we returned to Pn Hong, and then went on to Muang Yiw, in the valley of the Nam Kan. Having interpolated a hill which we had cleared, we made use of it to determine the position of Muang Yiw. Our route now led through the valley of the Nam Kan which was very unhealthy; but at last we ascended Pa Ting, and everything changed—atmosphere, vegetation, and scenery. Passing through a group of cedars, where we had glimpses of a beautiful, undulating, open country we encamped near an old wat, rifled long before by the Hlaw. We were now in the district of Puan; but as I had been there before, its beauty did not take me by surprise. There was now no uninteresting jungle to plod through, and every man, even though barefooted, stepped cheerfully forward. The natural charm of the place thrilled me with the same keen pleasure which I had experienced years before. The exhilarating atmosphere quickened the senses and heightened one's appreciation of the wealth and beauty of the country. The unsatisfactory feature in the prospect was the absence of human habitation, for, though there was abundant evidence of prosperity in former times the only work from which we could derive benefit was the road on which we travelled. Even this had suffered from neglect, and at times, in marshy ground, or in the neighbourhood of a brook, it proved treacherous.

We pitched our tents on the wat-grounds of Lio Pon Tawne, and were waited upon by the servants of the sub-commissioner. These men, each of whom gave himself a title, professed total ignorance regarding us, and demanded to know who we were, and the reason of our coming. I asked for their authority to put these questions, and they replied that their persons were as good as letters. I showed them the Kia, and when they wished to take it to the sub-

commissioner, I really got a splendid opportunity to ask them for an explanation why they had taken the Chinese women and sent them to look after the rice-store, and I told them that I would tell them they would not allow me to enter the city unless they let me go. I was prepared for all this to do my duty and the Chinese Commissioner of Lung-ching was able to get me my assistance from officials of the district until such time as they should get orders from Prince Pichang-tu Ruyi High Commissioner of New K'ai.

We ascended Pu Sun on the 22nd, a perfectly clear day after rain. With the telescope of the night and a 6-inch theodolite I was able to distinguish our basket-signals on Pu Nan, Wang and Pu San, Nam each being over 100 miles distant. The basket signals were over 20 feet in circumference. They were made of split bamboo, the white side out. They were oval in shape, and when new, however dark the bamboo was, they were readily distinguished at great distances on a sunny day. The top of the hill, Pu Sun, was of granite, a feature which distinguished it from other hills in this watershed. From the summit there was a magnificent prospect, extending over not less than 1000 square miles of the greater part of the great valley. The valley floor of this region seemed luxuriant as it was with waving cereals and lands, and gardens watered by streams which, now hidden in the shady recesses now appearing as streaks of silver, were lost in the distance. The lower slopes of the hills, bare of trees, but clothed with grass, were marked with well-defined contour lines at intervals of 100 feet, as if purposely laid out by the hand of man, but these lines were, in fact, paths which had been trodden by herds of cattle grazing over the plateau in bygone times of peace and prosperity. The summits of the hills were overspread with forest the slow and progress of which was marked at the jagged but distinct boundary-line assigned by natural forest law, as though the command had been uttered, "Thus far, and no further."

Close by, to the east, is Pu Sun Nam a flat-topped, well wooded and well-watered hill, which would make an excellent site for a sanatorium. It shuts out the view of the hills Tung Chong Kam where the Siamese lost a number of men before they drove the Hlaw from the stockade. Two excellent signal-trees were left standing, and a huge basket-signal. Not far from Lao Pong Tung

was Ban Mawn, where there were extensive iron mines, the iron being of excellent quality.

We encamped near an old wat of Wieng Kut. Near this place were the traces of extensive gold washing. Some day a reef containing gold may be discovered, and what a magnificent climate it would be to have a gold mine in.

We ascended Pu Ke, near the top of which was a thriving settlement of Miao, a busy people whom it was always a pleasure to meet.

From the summit of this hill, in the early morning of November 26, we enjoyed a spectacle such as I had never witnessed before. There we looked down upon the clouds, which overspread the hills, and seemed banked up to a level about 6000 feet above the sea. The appearance was that of a snow white ocean from which, here and there, a lofty mountain peak rose, like an island, towards the clear blue sky. At the foot of the hill, and to the east of it, flowed the Nam Nia (Siamese Niak) unseen, but its course seemed indicated by the clouds, which moved along as if drawn by its current. At one place there was a sort of cloud-cascade, where the vapour tumbled onwards in huge masses, so that one almost expected to hear the sound of the commotion. Gradually the surface-level became lower, showing more and more of the hills until, pierced by the beams of the sun, the whole mass rose in confusion and dispersed.

It was very painful to find that all my old Puan friends were dead. I had hoped to meet the good and true men who, at considerable risk to themselves, had assisted me during my former visit.

Leaving the hill and the friendly Miao, we went to Chien Kwang where we had some difficulty in getting rice. Supplies of that commodity were doled out to us in baskets, each bearing a seal in testimony of the accuracy of its contents, which I found to be exactly one half the quantity given at Muang Yiw.

The next hill which it was necessary to ascend was Pu Sao, to the south east, and, in spite of obstructions and fog we hurried on. My guide had a very ingenious means of striking a light. He was provided with an instrument resembling a pop gun, made of iron, closed at one end, and tight, with a perfectly fitting ramrod at the extremity of which was a hollow for touchwood. With a sharp twisting motion the ramrod was rammed home, and when pulled out the touchwood was found to be burning. There were numbers of traps for snaring pheasants, which were very plentiful as also were

plants and several varieties of grass. We saw also some small plants, and we started a bear race at the top of the hill.

At last we reached the top of the hill. We saw several trees, oaks and rhododendrons, with trunks gnarled and twisted, showed the prevalence of strong winds. The grass on the top of the hill was 2 feet thick.

The morning of December 8 was clear and sunny. The sun shone brightly, the temperature was 40° F. and there was a light frost on the ground. The waters of the Nam Kung, glimmered in the morning light, and, in the distance of a few miles away, we could discern the blue outline of the mountains. Smiles erected a basket signal as large as one of the two signal trees, and we turned our attention to Pu Bia, the highest of all the peaks. This hill, from where we stood seemed surrounded with snow-pinnacles of limestone rock, which would render the ascent very difficult; but fortunately, some of our men knew the country and were able to tell us an easier route. Under their guidance we retraced our steps, took the main road on the north, Kwang to the Nam Kung and at Ban Na Luan, struck off to Muang Awm in a excellent position, with extensive rice fields, mainly cultivated. Here we rested a day and distributed tobacco, salt, and chillies to our trusty coolies, to prepare them for the climb.

Leaving Muang Awm we came to the site of Muang Awm, a town which had been abandoned and the appearance of the fields showed that many a long day had passed since they were cultivated. The place had the reputation of having been a grazing ground for excellent breed of ponies. We passed the large old Muang Awm village at the foot of the hill. The settlement had formerly occupied a lower position but during a season of heavy rains it had been flooded and the inhabitants had moved to higher ground.

With a Meo guide we began the ascent and kept on the side of the hill. When on the move early next morning we found that the sodden ground had frozen and higher up we saw a pool, on the surface of which was ice a quarter of an inch thick. The ice was a great amusement to the little coolies, each of whom set to munching a piece. The summit of the hill consisted of a layer of clay slate or limestone, and the trees were all very small, being a species of boxwood. Moss was very plentiful, and arrangements were immediately

made in running up small huts, which a thick layer of moss made quite snug.

Like most hill tribesmen, our Kamu coolies wore as little clothing as possible, sometimes merely a piece of cloth scarcely large enough for its purpose, and under no circumstances sufficient to keep out the cold.

A nearer view of the gigantic limestone cliffs, whose eagles had



VIO VITA

the eagles, showed that any attempt to approach from the north or east would have been hopeless.

The night of December 20, 1892, was very clear and early next morning the thermometer registered 27° Fahrenheit. Ice had formed above a meter or an inch in thickness and the cook who had been collecting it, was very much surprised to find that when melted it was already the colour of the coffee he intended making. There was some difficulty about water, as it could be procured only from a ditch, but this inconvenience lasted only a few days. The whole night of the 21st a high wind was howling, but the thermometer did not fall

to freezing point, and in the morning it was 7°. The highest temperature we had seen was 100°. On the 2nd of October we left the hill, which had proved a most successful journey, and some parts of the Mekong having been explored. The height of Phra Bia is 1375 feet, and it must be the first place in the mountains south of the parallel of 23°. The highest mountain in the Malay peninsula at the source of the Mekong is 1000 feet, though there are some who assign to it a height of 1200.

We returned to the site of the old Mo village at the foot of the hill, and as our supplies were pretty well exhausted we were glad to receive from the Mo a quantity of rice and corn, and fresh vegetables, molasses, and ginger. From this last the cook made a concoction which was not a bad substitute for tea or coffee. The molasses was boiled, a couple of eggs beaten up in it; the dirt, of which there was as much as sugar, was skimmed off and we had some excellent treacle. We became good friends with the Mo, and as they wished to buy cattle, they desired to accompany us to Ban Tan Hek. The governors of this place were in trouble owing to a dispute with the Kamu of Muang Phas as to the ownership of the beehives which abounded on the limestone cliffs and from which large quantities of wax were collected.

We left the Nam Mo, a large tributary of the Nam Ngum, but without villages on its banks, and came to the deserted village of Na Luang. The houses seemed substantially built, but a strange disease, a kind of fever, had attacked the inhabitants, carrying off its victims after one day's illness. The villagers in their alarm attributed it to the evil influences of spirits and bewitched. They suspected the water had something to do with it for the stream was sluggish and of a dirty appearance, one small tributary which formed the chief water-supply, being particularly so. The unfortunate people had also been afflicted with a plague of rats which had overrun their fields, a plague which had extended over a considerable portion of Luang Prabang.

We crossed the Nam Ngum. I could not ascertain that any one had ever descended this river, which, we found, lies parallel to the hill for a length of about 500 feet. A Siamese required to bring the water, and I sent Luang Phra Wat Sa Tan with a chain and a pass to make a traverse. The task was not an easy one but he performed it most successfully along its whole length. The cave through which the river flows is frequented by swallows, which, in

great numbers, build their nests in the rock, and by bees, which swarm in the holes and crannies of the limestone rock. Every year the neighbourhood is thronged with people who come to collect the edible nests of the swallows and the wax deposited by the bees, but the spoil is difficult to reach, and scarcely a year passes without the death of some adventurous climber.

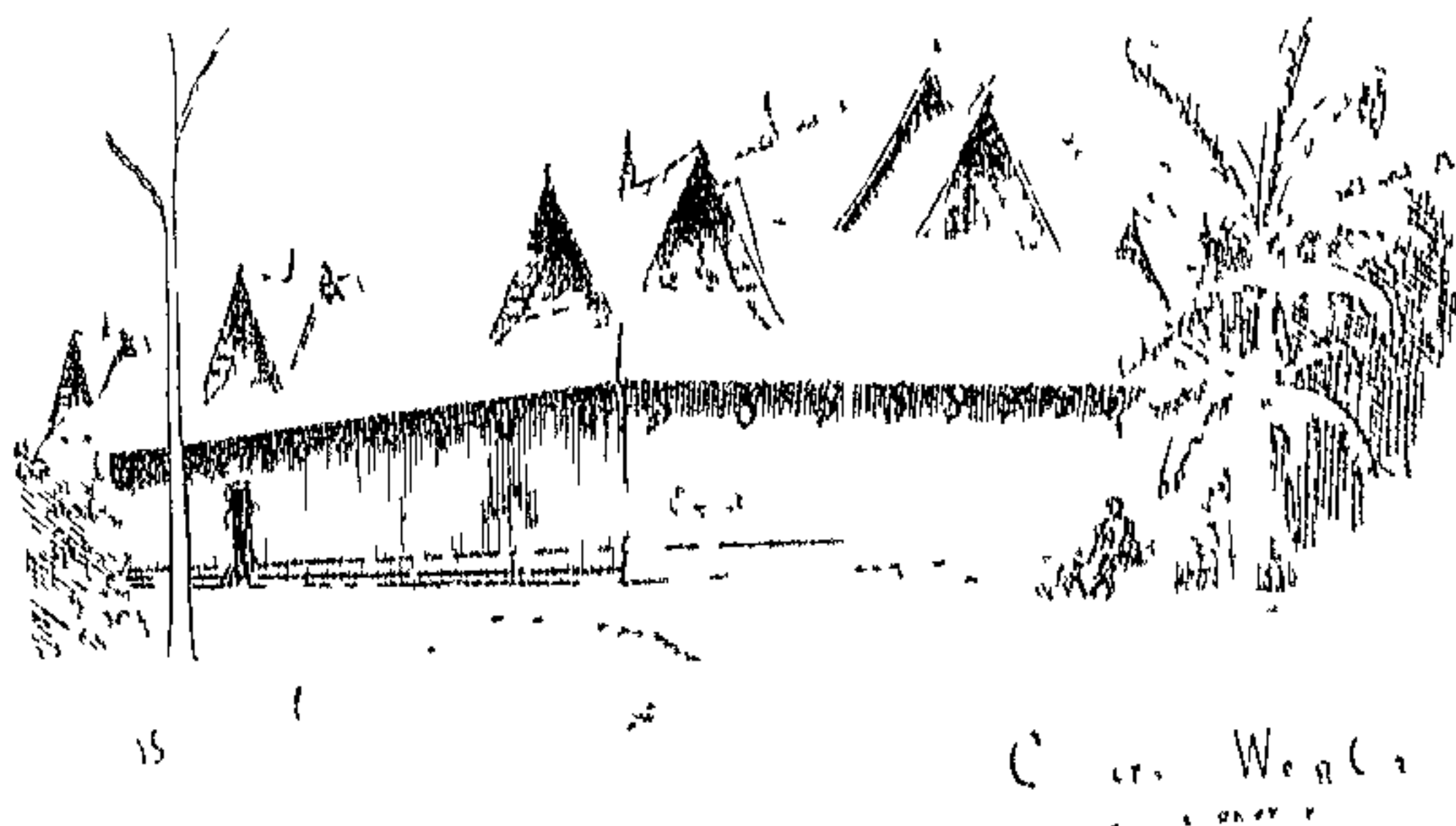
We marched to Muang Pun and there met Nai Heng, who had been of considerable assistance and had just cleared a high and prominent peak called Pu Mieng. He went on to Muang Kesi to pass on the transport sent by the orders of Prince Piachak, and to meet us at Ban Sawt, while we set out for Pu Mieng. Again we fell in with the useful Meo, who were pleased to be our guides. On this occasion I noticed they had provided themselves with *buckets* of *whisky* which they were constantly imbibing without any apparent intoxication. A large block of flint caused delay; it was of excellent quality, and the men insisted on chipping off fragments to use with their steels in striking lights. A great number of partridge and grouse were flushed, and we let go two handsome specimens that had been snared.

Pu Mieng is a peak 8132 feet above sea level, the north, west, and south sides being almost perpendicular and unapproachable. The shadows of these mountains in the mornings in evenings creeping over the distant slopes as though projected 40 miles away were interesting, and added very much to the beauty of the landscape.

On January 9, when we marched from the hill, a high wind from the south was blowing, and the diabolical haze, which retards all work, began to show itself. The ascent of one other peak, Haw Chon (which Nai Heng had cleared) had still to be accomplished in order to complete the work before the regular haze set in. Our route took us to the deserted site of Chieng Di, on the Nani Sen, a tributary of the Nam Nui. The spot is supposed to be in the possession of malignant spirits, the souls of the governor and his followers who were murdered by men from W'eng Chan in the days of its prosperity. Though the place is naturally fertile, even when many years ago, when it was well populated it was difficult to get any man to take up his residence there as governor.

Marching along the bare slopes of the hill we passed through Ban Na Win and ascended the divide between the Nam Nui and Nam Ngum, which was 200 feet above the Nani Sen. A lesser

descent to a us to a n g' e t p h' l e s t e e t e s, King
(Sian-ese Tung) Lat Se i at (00 f t a v s e v e d) Numbers
of p i n d l e s w e r e f u s e d y t e l o g s i t t h e g l e a d m e g e
v e y w e l l t o w a l k a l o n g t e p u t t h e o u t l e t e g o d w a s s o
r o u g h t o a l l o w p u r s u i t o t h e p a t h g o s F o r t h e o n l y w e
w e n t o v e r b e a u t i f u l c o u n t r y i n a s s a m e n g e w e l l
w a t e r e d p l a n, King Ma L a ("Horses' p l a y g r o u n d") w h e r e i s
a d a c e n t t o t h e K i n g L a t S e i



15

C. W. C.

CHAPTER XXXIV

CONCLUSION OF THE NORTHERN TRIANGULATION

ARRIVED at Ban Sawt, we met the transport sent by order of Prince Prachak, but, as the bullocks were slow and expensive, we managed to do without most of them. We had now to part with our Lamy Prabang friends. The Kamu were all in excellent health and quite stout never before in their lives having had so much to eat and each was carrying a little money to his home.

On January 28 we completed the work on Haw Choi, but the haze had regularly set in, and it was vain to expect to see our long rays until it had fallen. We could do nothing but set about fixing the positions of important places by short rays until it fell.

At the foot of Haw Choi, on the side of the road to Muang Yiw, were a number of large stone jars, neither so large as those we had used as other groups. In a hollow there were some larger, and those that were fractured showed large nodules of quartz embedded in them. Lying on the slope of the hill were numbers of small boulders, irregular masses from which, apparently, the material for the construction of the jars had been taken.

We dug out the earth beneath one of the jars, digging several feet. We have been carried on, at some times, beneath all of them, and thus may account for their leaning position. We found a lot of very inferior baked clay full of clay and amber beads. Another contained in it of superior workmanship and almost white. It was cracked and showed traces of having been smashed before, there was a piece of iron which was possibly used by a former depredator, it looked as though it had been brought from the Lamy stand near the ruined wall of P'm Sawt. We left Ban Sawt with eight elephants and twenty men, who carried all the things and instruments. On the crest of the hill, and by the side of the path, were large blocks of stone hewn into a particular shape. One was about 7 feet long, 2 feet deep, 2 feet

Pu Huat and Pu Kabaw, hills overlooking it, we moved off to peaks overlooking Muang Ngan, selected and cleared by Nai Heng.

While we were on Kabaw, on February 27, rain fell, the haze cleared, and the distant mountains were rendered visible. Losing no time, we passed on to Muang Pang, which, deserted when I last saw it, had now been re-settled, and was certainly more cheerful looking. From Muang Pang we went to the hills overlooking Ngan. The western slopes were covered with virgin forest for miles, but the eastern slopes were completely bare of trees. There were a number of villages, and the whole treeless valley had a very fine appearance. Traces of extensive fortifications were seen in every direction along the mountain slopes, on which herds of buffaloes were peacefully grazing.

We descended to Muang Ngan, where the signal on the river was at an elevation of 4867 feet above mean sea level, and the climate was delightful. From this town we immediately set out for the peak, Doi Sam Sun, 8710 feet above mean sea level. We enjoyed the climb through the heavy forest. On every hand there were beautiful ferns and flowers. We passed some enormous cedars, called Mai Le Le, the girth of one was 17 feet 6 inches, and of another 14 feet 6 inches each being measured at 10 feet from the ground. There was a strong cinnamon smell in the forest but I could not find any of the trees. Partridges were numerous and I bought three decoys, which I liberated, two of them had been prisoners for years, recognizing their fellows, but they appreciated liberty and flew off with lightning speed. The top of the hill was a great granite block, the peak being on the main watershed.

With me was a man who had been my guide in 1884 from Muang Pang to Muang Ngan. He was a brother-in-law of the Governor of Muang Ngat, who, with his five sons the youngest five years old, had been murdered in 1883 by the Governor of Muang Mawk. His wife and daughter (my guide's sister and niece) had been taken to Chao Sam at Paton, but had been redeemed by my guide for ninety rupees. The sister had since died but the niece was living in Muang Ngan. As this man knew Muang Ngat, I sent him with Nai Heng to clear and erect signals on the hill called Pu Sai Lu Tong.

On the granite rock at the top of Doi Sam Sun, signals fixed in excellent signal very ingeniously and so firmly that it stood throughout the season and braved many storms. Crossing the Nam

Chair we made, my interpreter said that we would afterwards be howled down by the spirits of the mountain and that low but very powerful demon, as we would view the whole valley of Muang Ngai. The views of the hills and rivers were highly picturesque and the contour lines, at intervals of about 2 feet were marked with great regularity. My companion was then over sixty years of age, and on my asking him how the hills and rivers had been formed, he replied "they are paths made by bullocks and elephants when grazing." I remarked that it was a beautiful country and he answered to the subject "Yes," he said, "I was born here my father's grandfather, and all before us, as far as I know, were here. Those old traditions that are said to belong to a time beyond the memory of man for my grandfather knew nothing about them, but those lines that you can make out along the side of the hill were once enormous buildings, and the terraces on the hill-slopes show that the soil was once planted with 'garden' rice. There were once reservoirs by bunding the streams, and channels for the water to the fields. Once the country was crowded with a happy and prosperous population but they are all gone, and the glory of the hill is departed."

On March 8 we said "good-bye" to the Muang Ngai. Passing over Pu Mie g we had once again covered with grass so Muang or tea, and crossing the next watershed we descended into a rough, jungly country and entered the valley of the Nam Mue. A local driver met with a bad accident, and was unable to go. Muang Mue and the elephant fell on the steep path which with the recent rains had become very slippery. I told the Governor of Muang Mue who was on his way to drink the water of all good things. Chong Kwang, and urged him to return as soon as possible as his case was very awkward. We camped at Pan Mung where there was some excitement about a man eating tiger which about ten days before had been one of his former victims. It rained very much and rainy, we kept no watch on the animal, but the men were placed in security in a house in the village and we burnt the bones.

The valley of the Nam Mue is rough and very jungly, and the right bank of the river are precipitous limestone cliffs. Muang Ngai is in an excellent position, which recalls Puan but it has been completely deserted since the murder of the governor and his sons.

The surrounding hills are well wooded, and teem with game. There was a beautiful pheasant, called Nok Ang Kiwt which had a call like the yelping of a dog. We met with the traces of a herd of elephants. Pushing on to the head of the Nun Mo, we ascended Pu Sai Lai Leng, 9059 feet above mean sea-level. On this magnificent peak, which had been created by Nu Hen, we found two varieties of rhododendron with red and white flowers. There were also a number of orchids, two kinds were very pretty, with a white throat and five pink petals, the others were all white.

It was necessary that our work on this peak should be as complete as possible, for from this point began the eastern boundary of Siam. But a dense haze veiled the face of the country, and, while we anxiously waited from day to day, our provisions ran short. It was not till April 22 that we could finish our observations. I then sent some men down to Ban Na Ngoi, at the northern base of the hill, to purchase rice, while the rest went back to Muang Mo. Some of the Na Ngoi men came up, ordinary Lao under the administration of Anam. They showed me how the boundary then ran between Anam and Siam.

From this summit I had expected an uninterrupted view towards the east, even as far as the sea, but mountains intervened, extending apparently to the seashore. One grand peak, Pu Hut, 8175, I think, could be seen from the shore, thus, only a few more peaks and I might have reached the Gulf of Tonkin. But I had to turn back, and continue the triangulation south to the Mo Nam Kawng.

Our journeys were now more difficult, the paths were very slippery, leeches swarmed in some places, and we had daily showers. The main watershed was still granite. We passed through Muang Mawk, a pretty spot with old fortifications, all but deserted. Progress along the Nam Mang was difficult, the river was much swollen, and as the crossings were frequent, there was considerable danger for the men carrying loads. Their troubles were, however, over when we reached Ban Thum on May 4.

As the rains had set in, it was not advisable to have too many men moving about on the hills. Smiles therefore went down the Mo Chan to prepare and measure a base-line on the plain across the Mo Nam Kawng, while I ascended Pu Mun and Pu Kap and completed observations there. On this latter peak, among the stones of a little brook a strange creature was captured. It was like a lizard,

about 12 inches long, with a shield like a tortoise on the back and stomach, the tail, which was about 1 inch long, was as the people said, that of a alligator, the neck was long, and the head small and hard. The head could not be lowered on the shield, but the neck was completely protected. The creature escaped in the darkness, the men said they had not seen one before.

On June 1, accompanied by Nu Hui, we started for Pu Lu. The first part of the ascent was interesting. The forests were thick, and there were numerous tracks of elephants and rhinoceroses. There are two kinds of deer called *phreaces*; they are known to the people as *Su* and *Het*, and are sought for their horns, the most valuable horns being distinguished by a protuberance on the under side. Cinnamon was plentiful in that region.

With the ascent our difficulties increased. The rocks were so white, and in some cases so weather-worn as to assume the color of swaying rocks, even potholes were not white. The streams were red with ferric oxide. We found ourselves fully launched into difficulties, for the rocks rose perpendicularly all round, and often we were brought to a standstill while the men looked for openings. Our only means of egress was sometimes through dark passages, over yawning chasms, or by scaling rocks with ladders hastily made of twigs and roots. Sometimes having with difficulty scaled one height we discovered that it was encircled by others, which rendered progress impossible, and returning on steps we had to renew our efforts at some more hopeful spot. Our perplexities were increased by the rain which fell every day, and by the fog which constantly hung round and shut out the view. The upward advance was tedious and slow, but at last we reached Lu Pung, 6087 feet above sea-level. The southern face of the hill was a sheer precipice of from 3000 to 4000 feet drop into the valley of the Nam Pawa.

The strain on the men was very severe, and my Malay servant who had been suffering from some pulmonary complaint died. The poor fellow was buried on the hill.

From Lu Pung there was a magnificent view, and in the valley of the Nam Pawa could be seen some abandoned fields, the site of a Chinese settlement, called Muang Tawu, in the days of Wiang Gai's prosperity. After completing the observations on Lu Pung, where a large cypress was used as a signal-tower I pushed on over rocks and through fog to Pu Katu, 6634 feet above sea-level. But beyond this

I could not go, for, between it and Lawek (6906 feet), less than a mile distant, there were sheer perpendicular precipices. The attempt on Pi Lawek had to be abandoned, as it was now too late in the season (June 15). These peaks are difficult to climb at any season, being nearly always enveloped in fog, while all the winds of heaven beat against their exposed perpendicular sides. The supply of water would also be a cause of trouble. Water may be heard deep down in the recesses of the rocky ravines, but it is not seen nor can it be approached. We got our supply from the daily rain.

Leaving the hill, I came down the Nam Nia to the Me Kawng, and there, on June 17, for the first time heard that the French had, to the surprise and indignation of the inhabitants, claimed the whole country to the Me Nam Kawng. I also got orders to return immediately to Bangkok.

Being anxious to make my work as complete as possible, I at once set about the measurement of a base line, but, as the water was fast rising and the base line unfortunately placed, the attempt proved impracticable. I finished the observations for latitude and azimuth, which were sufficiently accordant with the values deduced from the triangulation. My intentions had been to "recess" at Nawng Kai, and, after the rains, to resume operations with a view to carrying the survey round Siam, and thus settling once for all the geographical limits of the kingdom. It was, therefore, with great reluctance that I had to abandon this important work.

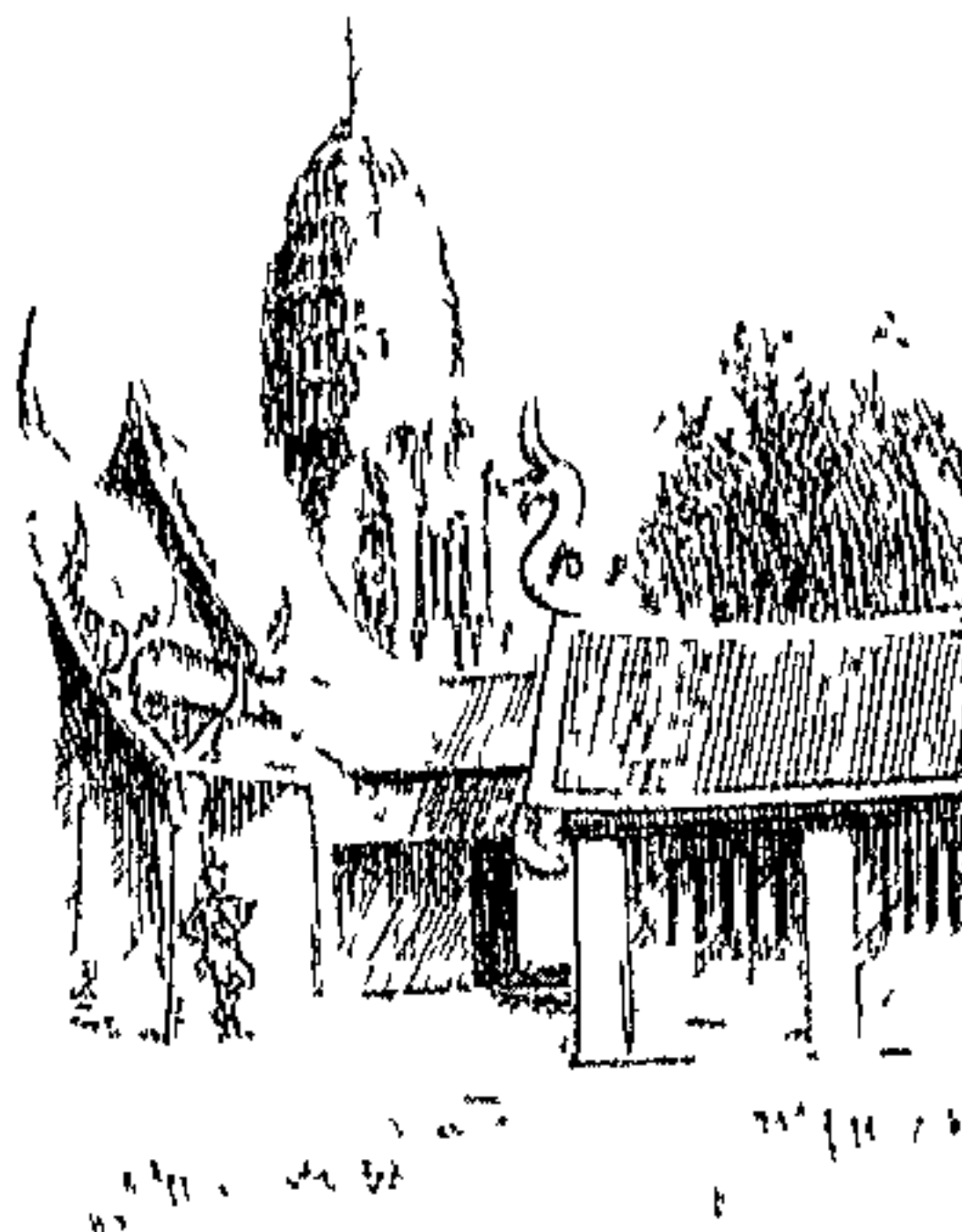
At Keng Sadawk on the Nam Kawng there was a settlement of Roman Catholics under a priest, a native of Chantabun, belonging to a mission, the headquarters of which were at Nakawn Panom. He could give us no authentic news, but believed there was trouble, as numbers of soldiers in boats went down the river. There were rumours, he said, that as soon as the French came to the Me Kawng, all the Christians would be murdered. Siam was one of the few countries in the world where Christians had not been persecuted for their religion, and Prince Phachak, who personally went to Nakawn Panom, reassured the missionaries. We hurriedly went up to Nawng Kai on July 6, where we received the greatest kindness from the Prince.

To return to Bangkok *via* Koiat was out of the question, as the whole valley of the Me Nam Kawng was under water. We could reach the capital conveniently by Paklai and Utarlit and therefore

went up the river to Pakhu. Owing to the floods the rapids were not distinguishable, and we kept along the banks. At Pakhu meeting some elephants which were let run to let them for twenty rupees apiece and in eight easy miles we reached Utuadit. There we took boat, and arrived at Bangkok on August 6, 1893.

On August 7 the blockade of the port was raised and M. Pavie, who was now the French Minister resident in Siam, and whom I had not seen since we parted above Iakum in 1880, returned to Bangkok. Diplomatic relations between France and Siam were thus resumed.

Smiles, the best of companions and staunch friend, died a year later, while exploring in the eastern provinces.



APPENDIX.

~

The history of Chieng Sen, as copied by P'ia Siti ni-Sawn in the year (Chulsakarat 1218) A.D. 1856.

The first country made was Chieng Lawa and P'ia Anuradha, who made an era, came with one thousand followers (Borriwan)

He founded Muang Nguan Yang. His descendants were Lao Kop Lao Chang

Lao Kao Keo Mi Muang reigned 5 years.

„ Tang reigned 20 years

„ Kori „ 0 „

„ Leo „ 10 „

„ Ku „ „ „

„ Kum „ 10 „

„ Keng „ 20 „

„ Ko „ 20 „

„ Tun „ 7 „

„ Tui „ 20 „

„ Tim „ „ „

„ Su „ 21 „

„ Kwak „ 21 „

„ Wan „ 37 „

„ Chin „ 10 „

„ Chum Palung reigned 1 years.

K'un Chuang reigned 1 years, who was killed a little, finishing the dynasty of nineteen kings

The 1st king was succeeded by

Lao Ngum Luang who reigned 22 years

Lao Chuen, who reigned 10 years;

Lao Muang, who reigned 25 years,

P'ia Muang Ru (P'ia Mang Ru) This king, after three years' reign, founded Chieng Rai in the year 2 (A.D. 22), and in 60 founded Muang P'ing. He then waged war with Lanpua, and after a seven years siege took the place. In five years he built Wieng Kum Kam, 618

INDEX.

- A Fur, au hai's Chinese boy, 11, 12, his adventures, 13
 Aka hill tribes, location of 100
Alave of Chieng Rung, see Chieng Rung
Alove of Chieng Dao, see Chieng Dao
 Aloes, 188
 Amoy, Chinese from, working in the Italian mines, 17
Ana n of Pa Kung, and its founder 70
 relations of with Siam and China, 60
 King of, in 1823, 37-8.
 — (Luduk), and his agent 100, 103.
 — attempted aggression of, 100
 — liberating the sons of Chao Noi 38
 — place of refuge for rebels against 39
 — protection of invoked by Di Naliss, 51
Ana n-Siam boundary, shown to author by a Lao from Anamite territory 191.
 — Tonkin telegraph constructed by M. Pavie, 106
 Angels at Doi Sutop 117-8
 drinking vessels of, 19
 of the south wind, 39
 Angkor, M. de la survey staff 119-120
 Animal sacrifice, 66, 90, 169
 Ant caton, *see* Klot Lin
 Antiquity of the Loring district 117.
 Anurata, chief of Luang Prabang and his son taken prisoners 71
Appendix (History of Chieng Sen) 195-6
 Areca palms, 12-173, nuts of as tribute, 60
 Argus pheasant, 12
 Arun Rajakumar, story of, 71-5.
 Angus Hill, view from elevation of and dwellers on, 13
 Author's name omitted in official documents, difficulties consequent on 152
 Ava interference of with affairs of the Sibsawing Pin, 163
 Axes made by the Mission, 120 by the Yio, 150
 Ayuthia, former capital ruins of and importance of present city 111
 Baining river, author's journey down 17
 Balom village position of, and gold mine near, 15, 16.
 Bamboo floating bridge near La Sap 11
 — bridge for elephants over a swamp, 52
 — torches, 70
 Ban Ang, scene by on the Nam Chan river near, 56
 — Kaw Noi, author's camp near, 101
 — Lu, 81-91
 Mawn, lion mimes at, 181
 Mechan mountain vista from 149, survey staff difficulties at, 110
 — Mukda 121
 — Na mountains near 120
 — — Ngai, Laos from showing the Anam Siam boundary to au hai, 191
 — Naluaig lost child left at by author, 167
 — Pawn, ruins at, 137
 — Suk Ding, landing-place for Luang Prabang 22
 — Sawt 185 survey progress beyond 187, *et seq*

- Ban Sen, mountain, Muang village
 on its summit, 1
 — Sol Y, burial site, 71
 — Tin, 111
 — Ton, 88
 — Hek thob, live lily, 181
 — Lung Yang, low pass, a little road
 and legends of, 17
 Bangkok, with its visits to, 181
 — Chinese secret societies, 1
 — estimated population of, 11
 — portion of Chinese, 9
 — events of 1893, 11
 — exhibition, products, 2
 — navigation of the Mae Nam, to 11
 up to, 21
 — P. P. P. large elephant, 27
 — white elephants, 21
 — Maubien, telegraph, survey of
 route for, 1
 — P. P. P. telegraph, con-
 structed by M. P. P. 11
 — P. P. P. telegraph, 2
 Bang Pae, island, place and Buddhist
 church of, 22, occasional residence of
 the King of Siam, 118
 Baw He, black salt from, 2, salt water
 of, 11
 — Luang, black salt from, 162
 Beans, 168, 182.
 Beetles (horned and longhorn) found on
 Nang Wang hill, 172
 Bengal, cattle droppings utilized as fuel
 in, 188
 Black-bellied Ibis, 37
 — Eggs, the, the only one found at
 Taokai, 110
 — of C. L. L. defeating the so-called
 Lung Cheng Kan, 95
 —, leader of (O. B.), voices
 of P. P. P. to, 108
 — river, see Nan
 Buiw mountain, near K. P. P., with its
 ascent and survey of, 121
 Bull-races between men and women, 76
 Boi Kam Aikam, settlement and its
 ruler, 5
 Boi Co, owning rights over to the forests
 in the Mae Nam valley, 5
 Borobodai, ruins of in Java, resembling
 those of Wat P. P. P., 11.

- Uag Mup highest peak of the Do
 Lung range elevation of and gold
 washings at foot of, 113
 Chao Alhaya Guman hermit king of
 Sikotai and the serpent woman, 71-5
 Anu Governor of Wieng Chan
 1823, ill treatment of his son and re-
 sult 37 flight of and loss of his ele-
 phants, 41, his capture, 51
 Bun Luang, obstructive official of
 Nn, 153-4, his diploma placed by on
 boundary tree at Pakobai, 160, meet-
 ing with him at Muang Nang
 159
 Fu Wong Governor of Yunnan, the
 original head of the Hlaw marauders
 14, and the tribute of Luang Prabang,
 10
 Kant Governor of Muang Puang,
 oppression and extortion practised by
 16, at Udom, 189
 Lai and his Black Flags, proposed
 visit of the Survey Expedition, 95
 — his influence and importance, 197
 — his relations with Kutoing, 100,
 103
 — sends his sons with letters to the
 Survey camp 100-1 imprisonment of
 the sons by Pui Samak, 106, conse-
 quences, 108
 — territory under his rule, 102
 — Luang, Chief of Luang Prabang,
 171-5, driven out by the Hlaw, 101
 — Luang Soim, Chief of Luang Prab-
 ang, 71, his settlement of the Sac Sam
 Pa, 102
 — — Un Khan, Chief of Luang Prab-
 ang, 71
 — Noi, execution of, 18 his five sons
 98
 Pui Kraahom, Special Commissioner
 to settle matters after rebellion,
 121-5
 — Po Governor of Muang Pa, 98
 — Prasat-Lavng, favourite island of,
 22
 — Rajput of Nan at Paka 157, a
 Sing 166
 — Rajawong son of Lia Pichai 31,
 95-7
 — Sai, military operations of in the
 Wieng Chan rebellion, 18
 Chao Thi Wan, father of Maha Wang
 (q) 168
 Uag Governor of Muang Iai,
 death of, 85
 — Upuaj, slain by the Hlaw at Luang
 Prabang, 11
 Ulaung 113
 Ulok, Di, 131-137, American resident
 in Siam his useful instructions 118
 123
 Ueng meaning of as a prefix 157
 Dai, deserted town superstitions re-
 garding, 187
 Dao or Aleve and its founder, 70,
 160
 — Mountain, 118, elevation of,
 126 as a fixed point for survey, 132,
 superstitions of people at 126
 — Hung or Rung (*see* Chao Dao),
 113, 138
 — Kai, on the Nam Chiam reached by
 author's party 96
 — Kwang aspect of and teak forests of,
 sappan is found near, 116 river dis-
 charge at 119 Yao colonists en route
 for, 153
 Keng, history of the state its con-
 nection with the survey, 151
 — Keng state 161
 — Kung Li, utilized for survey pur-
 poses, 157
 — Kwang, or Muang Pau, or Puan
 (q), Chao Anu betrayed at, 38 drink-
 ing the water of allegiance at 1,
 position of fixed, and survey beyond,
 188-9, *cf seq* short-weight supplies at
 181 valley of and ruins of city, 50-1,
 its founder 70
 — Lai, residents at, 36
 — Lo, fortress, 93
 — Mai, aid given to the survey by the
 Second Governor, 119-20
 — — aspect of and modern improve-
 ments in 2^d English Vice Consul is
 appointed 106, Mai route to, elevation,
 size, architecture and fortifications of,
 111, inhabitants 115, increase of Biru-
 pundo, in 117 market roads lines
 to, 111-5, mountain beyond, railway
 route over, 116 railway route to sur-
 veyor, 113, red brick walls of, 25, 111,
 responsibility of the chief in regard

- to rain, 178, surveying, 179
 railway station, 179
 Nam Nai, 8
 Ohio g Ma, in utility of, and the
 national right, 21
 ——— and Jampun, boundary between,
 118)
 ——— and Rung, disputed land
 between, f
 ——— Rung, 11, walked and at
 obstructive officials at 1
 survey work
 ——— plan, starts from 112
 ——— Rung or Alive (see also D) and
 Ohleng Hung) (see Meo visit to
 1855-1612, limits of its jurisdiction
 161, tribes dwelling at, 63)
 ——— Sen 13 author of, 110, begs and his
 near, 137 figures of Guatemala rule at
 138, governor of hoping to survey
 arrangements, 110, history of appendix
 19th legends of 198, railway terminus
 on the Nam Kawng 1 many years
 quarters of ant on at built 1
 settling on 12)
 ——— Plan, floods of and then effects,
 97
 Tong on the Nam U,
 ——— Tung over state of Ceng Keng
 151, ts chief and his lower,
 Muang Tun and olding t 19th
 settlers from in Sungai 151, S
 retreat from in 18th 116
 ——— and Oog Lung and s
 between 163
 China, development and its results 13
 ——— secret societies legal 1
 ——— and the Sibawang Pan boundary
 between, 16
 Chinese brigands see Haw
 ——— capture of Si gor
 ——— cool alleged possession of by the
 devil 111
 ——— miners in Krone, 17 gold mines
 near the Upper Perak river, 151
 ——— population in Bangkok taxation
 of, 9
 ——— of Korat, trade and vices of, 27
 ——— in Lopburi, 11
 ——— rights in the Sibawang Pana, in
 1855-161
 Sha is on the N border of Shin 130

- Doi Phu, hill, cleared for survey purposes, 110
 Sun Sum peak, elevation of, and animal vegetable life and geological formation of 189.
 — Sut p, lofty mountain peak of, 122 elevation of, 121, pagoda on, *ib.*, alleged neglect of, the cause of scanty rains, 147 its cultivation in 121 water supply of Chong Mai brought from, 123.
 — Tat Tawng, 111
 — Tum, difficulties connected with survey from 151
 — Tung mountains, and pagoda 113
 — Tung, wooded hill, source of the Nam Koin, 188
 Dong Wing mountain, Yao settlers on 162
 Dragons belief in 67 8

 EAGLES, 183
 Ebony of Luang Prabang, 62
 Eclipse of the sun, legendary cause of 75
 Elephant taming Siamese at of, 15
 Elephants, behaviour of at river crossing, 88 9
 classification of in Siam, 21 5
 — trade in, by Burmese, 119
 — white, 21
 — wild 32 121 182
 England, occupation of the Siam states by, 135
 — treaty of with Siam, and Vice-Consul appointed for Chong Mai, 106

 FERN, S. gnor, Italian naturalist, beetles found by in Burma, 172
 Felt, trade in, 119
 Ferns on Blinjaw hill, 12, at Puka 167
 Fish caught at Luang Prabang, 63-4, kinds not killed by flood at Pichai, 76
 France and Siam diplomatic relations between resumed, 194 treaty of with Siam and Vice Consul appointed for Luang Prabang, 106, 173
 French activities in Siam 105 6
 — colonial coinage, 138
 — forces in Tonkin menaced by the Haw, 41, operations of, 100 10
 — occupation of Muang Lai consequent Yoccoodus, 158
 priests and travellers at Muang Ngan and consequent troubles with the Haw, 51 1 travellers encountered at Chong Sen, 138
 French and Chinese relations between on the Nam Phu, 101

 GAIWAY, M. William, chief engineer Ayutthia Phu railway survey author's connection with, 11, drawing of the Gulf of Siam 116
 Gaing Inas mountains near, 17.
 Gatluna (see also Buddha) bones of, in the Phu Chawn Si P'gola Luang Prabang (6 figure of at Muang Lai offerings placed inside 136 7, figures of in caves near Phu Sap, 12, golden image of called the Prabang images of abode of, 71 Katamapel figures of 138
 Gibbon monkeys, Bhi yaw hill 12
 Gold, discovery of near Muang Lai 117, mines on and near the Upper P'rak river worked by Chinese miners 15 16
 Governor or Chief of Nan, the, and his history, 71 80
 Gowat Dr, his fever cure, 112 3
 Great and Little Fire Hills (volcanoes) on the Muang Luang plain, 81
 Grouse, 182, 183
 Gulf of Siam, establishment of 8 9, drawing of M. Gaiway in, 116, rivers flowing into, 13
 Gun-benjami, trade in at Luang Prabang and p'ce, 61 2 also elsewhere, 119
 Gutta percha trade of Patani, 10

 HA river, Kama river at mouth of, 162
 Ha state 161
 Hai-oung scenery of the Siamese, 11 20
 — plastering by the Meos, 150
 Hancockist, Sibsawng Pana 161
 Hampshire, Di, of Pinang, 17
 Haw, on Chinese raiders see Lung Chong Kai, barbarities of, 86 7, country inhabited by and terror inspired by, 10, 41 *et seq.*, at Chong Lai, 11, descent on Muang Teng to avenge Chao Lai's imprisoned sons 108 then depredations at Luang Prabang 101, incursion of into Patani 38 introduction of into districts of Luang Prabang by Kaitong 102 3, legend of a massacre of near Ban Luang Yai, 117, menacing to French

- Mango s, wild, 12
 Muadon te nple's flooring of 22
 Muand n, Sulima, How under his
 travels and companions 112
 Massie, M., out is a big w d at
 Chong Son, 138, geological subs s, f,
 171, 177, illness and death of 177-8
 Malm n g d of How takes met at
 Pio, 111 survey for telegraph line to
 from Bangkok trade, with Rah ng,
 2 old and difficult trail to, 120
 Ma Yuh Tehung see Muand n
 Me Chan river, base line in pa l on, by
 S n l s, 21, jungle and wild cattle near
 11, source and course of and gorges
 on, 118
 — Chai river at Muang Tang and its
 source, 127
 — Ing plain, 46.
 — river and the Me Lao, low pass
 between 116-7
 — Kawng, Me Nam Kawng or Nan
 Kawng river, 93, author's voyage down
 to Chong Kawng, 116; in full flood
 175, immense width of at Luang,
 Prabha n, 66 near Chong Son, 138
 fish of, 61, in full volume 176, volume
 of at Chong Kawng 119; geological
 formation of bed at Pa Talat, 171; lofty
 peaks near, 6) 182 using o, putting
 a stop to survey work 1.3 states east
 and west of, 161 survey towards, 191
 unsatisfactory as a boundary, 108, with
 and volume of at Nawng Kai, 93 white-
 l lled fa of, 97, Lu Sin tribes on
 169, Yio ti n on, 150-1
 — Lao river, hot springs on and railway
 route at, 116 low pass between it and
 the Me It, 116
 — — valley, Burmese pedlars trading
 in, 11) floods in, 117 superstitions of,
 65-6, and legends, 67
 — Nam Chao P'ra n, bird life along,
 22 limit of navigation 21-2 fish in
 flood volume of and ordeal by water in
 76 point of diluviation of, 78, steamer
 voyage on, of the Border Survey party
 118 times on 37; vegetation on, 2
 — — Kawng see Me Kawng
 Me Nam Nga and its affluent the Me Ngao,
 171.
 — Ngao river, affluent of the Me Nga,
 171, high cultivated mountains near
 15)
 Me Nam Pa, limestone rocks along, 178,
 lofty cultivated mountains near, 1)
 Ping mixed spiritaking, 121 poisoning
 on, and rapids in 120 tributaries
 c, 120, us 11 in galls 118 water
 wheels on, 16, with a few Muand Pak
 11)
 Sime river, affluent of the Me Pa,
 5
 — Yum river valley of upper, 7
 — Wa g river at Nakawn Lampang,
 113
 — Yom river, floods of, 111
 Men Kaw, rapid on the Me Nam Na, 70
 Meo hill tribes aspect, dress cultivation
 and customs of 103, 150 author's
 favorable opinion of, 181, 185; evil,
 abandoned found by author, 167, mi-
 gations of, 11) 5) mode of procur-
 ing water, 171, population of in
 Nam province 8), strong heats for
 strong liquors, 187 villages of and
 inhabitants near Chong Kawng (hand-
 shaking it), 113 or cliffs of Pa Bi
 181
 Messages notched sticks used for, 1)
 M g o t e t t n s t o, no local
 va ion of, 12
 Mok Suk hill village chosen for camp
 153-4, survey work near, 176
 Mon, 1, 1 of Luang Prabang, 71
 Moss thick, on hill-top 182
 Moulot, Charles death of at foot of Pa
 Sur g hill, 67-8
 Mou tun beyond Samd 1), getting the
 elephants up 11
 Mu g Ahin Collins' journey to, up the
 Nam U, 18.
 — Awn, cultivation at 182
 — Chi, deserted town of, 72, 121 182
 — Fang, hunting near 191 rendezvous
 for the Frontier Survey party, 11 re-
 sults of How in oads, 1), swamp, and
 jungle on 51, 127
 — Pak, land route to Nam via, 78
 — Nam, settlers from in the plain of
 Sing, 159
 — Hawl, 'flog-dums' met with at,
 121
 — Hin 79

- Muang Loi g destroyed by Burmese forces present flourishing state of 17
 — Tin n, s 30, 123.
 — Tum boundary question, 17
 ruins of 17
 — — — — — position, in valleys and mountains near 16
 — Uen, destroyed by loc 1, 80
 — Wi, route from 73
 — Yi, author of illness at and its aggravation 108
 Yang, destroyed by flood, 5
 — Yaw, a Papuan village of, 15
 — Yaw, the Hawak (1) position of determined, 179
 — Yon, destroyed by flood, 80
 Musical instruments 5 76 113 1, 121 123, 168 173
 Musum tribes, costume, customs, cultivation and habits of 111, origin, 130 1 occupations of 129 131, 12; guides describe s voy party 141 those of Pahon Pok, the dance 120 entry of it to Muang Pung 111 those of Sale g costume of, 132.
 — traders and their wares, 1 traveling with natives, 137
 — villages and dwellings 120 children 11, 112 spirit houses attached to, 130, 12
 Nai Hing, of the survey party, good work done by, 185, 191, 192
 at, brother of Pina Si si, murdered, 113 1 152
 Nakawn Lu pang, a Lakawn old walled city, in miserable plight, 14
 — Panom kind y Ron n Calloli misadventures of, 177 8, 193
 Swan, at country near, 2 low hills along river 1, 78, 111 for steamer navigation on the Mo Nam 118
 Nalung Pang, s e Yusu
 Nan Ben and Nam Nga the divide of, 168
 — — — — — river author's voyage down and its dangers, 55 7, former cultivation and present timber trade of, 189 90
 — — — — — river, 160
 — — — — — river, attempted voyage down 15 7
 — — — — — river, 111 valley of 176 leper village on, mouth of 121, mountains near 12.
 — — — — — valley, unhealthiness of, 179
 — — — — — river so 100 of 188
 — — — — — river 1 a Pap's flight over 135
 — — — — — Kawng s Mo Kawng
 — — — — — Kawng walled city on 113
 — — — — — La river, tributary of 17
 — — — — — La river, 100 water of, 10
 — — — — — Ma and Nam Pa rivers, ridge between at Lasead Yao villages 177
 — — — — — Mo river tributary of the Nam Nga 181
 — — — — — valley, rough jungle region of, and mountain at head of 190
 — — — — — Mung river in loc, difficulty at crossings 191
 — — — — — Ngai river affluents of, 160, divide between it and the Nam Ben, 68 salt found along 170, voyage of author down, 170-1
 — — — — — Ngan river and its tributaries and canoe course 181 188
 — — — — — Na river, course of, 181 remains of antiquities visible across 51 tributaries of, 18
 — — — — — Na river, affluent of the Nam U, author's voyage down and rapids on, 101 leg nary voyage down, 70, M Park returns from, 108
 — — — — — Pa, limestone cliffs, and a passage by survey party when in the 178
 — — — — — ridge between it and the Nam Ma, 177
 — — — — — Pok river boundary pillars at head of, 166.
 — — — — — Pat augh path near 73
 — — — — — Sai river, path down, 137, plain at head of, 96
 — — — — — Sawng, canoe by 18 of, 155
 — — — — — So fo d near mouth of, 162, Kamusettlement of, 13 a tributary of the Nam Nga, 16
 — — — — — Sen, river drainage area of 188 tributary of the Nam Nua, 185, 188.
 — — — — — valley, stone jars in 188
 — — — — — Ta river, boundary line along, 162 confluence of with the Nan Dang 160; rice trade along 155; watershed of, Smiles' work along, 17

Onchils, 191

Ordered by water among the Lao 76

PA KAI TAW hill animal and bird life of 171 difficulty of climbing, 178, elevation of, 179.

— Kung o Anan, its fountain, 70

— Pung rock, author's camp at 162

— Sang cing, elevation of, 163

— Ting, beauty of the district, 179

— Yang hill, cleared for survey by P'ia Sidi, 151

Pa om Pok author's journey to, 129, Indian survey value of 132 summit reached by author 132

Pahng river lofty mountains at source of, the elevation, 181

Pak Hum Kamu village at mouth of the river Ha 162

Paklai on the Mo Kawng 73 author's return to Bangkok via, 193-4, boat route to from Luang Prabang, 62 the Nan Chan at rock channel of and rapids on, 57 M Pavio at, with the old chief of Luang Prabang, 109 P'ia Surasak at, 108.

Paknam Po, author's journey to with M Pavio, 106 division of the Frontier Survey party at 118 point of confluence of streams forming the Mo Na Chio P'ia, 78.

Pailul hill 151 utilized for survey work, 157.

Pam ues, 112

Patul peak, source of the Me Sa author reaches the summit of 18, and utilizes it for survey work, 161

Partridges, 18 182, 18

Panai, subdivisions of, in the Malay Peninsula subject to Siam, 9 10

— town river nlayah, 10

Pavio, M., First French Vice Consul at Luang Prabang, 107 6 movements of 108-10, author's meeting with at Bangkok, 111

Pw Muang tho, 186

Pea fowl, 18, 82-3

Pegu or Hongswadi, its fountain, 70.

Peak and Patul, disputed boundary between, 8, discussed with the Siamese commissioner 15 formulation of the

respective claims 17 elephant houses in, 11

Peak river mountains and tribes at head of, 13, rocks obstructing channel, 17, underground course of its valley of, 15

— Upper, a rioter of and gold mines near, 15 16

Personal and territorial jurisdiction and taxation in North-East Siam troubles caused by system 101 2

Phu eo, Constantine Prime Minister of Siam, 1115, ruins of buildings erected by at Lopburi 111

Pleasants, 153 179 181, 191

P'ia Ba Tamrat King of Sajanala, and his brother, effect of their visit to China 75

— Maha A at defeating the Hw at Wat Luang 36 and at Wieng Chan 38

— Nak, King of Serpents, his granddaughter and the Hermit-King of Siam, 71 5

— Pip the fire-booter, at Muang Pang, 128 his flight, 135.

— Pichai, Sawng Kian, Siamese boundary commissioner 8, his conference with Sir Hugh Low, 15 sent on expedition against the Hw 78 81 arrives at their stronghold, 85 is joined by P'ia Raj, 86, writes to Chio La, 95 shuffling conduct of the survey party, 17 18 conference with the Hw at Onong Lo, 100 1.

— Rajamanakun, the elder, destroying the Hw stronghold, 26 37

— the younger, general in command of the expedition against the Hw, 23, reception of, at Nawng Kai, 3 with the expedition against the Hw, 81, arrives at their stronghold, 81 wounded in the attack, 86.

— Rajawannakul, military commander, 78

— P'ia defeating the Hw at their chief fortification, 38, and destroying it 11 proceedings of against the Hw, 72

— Riddhong, Commissioner of Luang Prabang, helpfulness of to the author, 115, 171 175 177, 180

- work 1, 185 for rice cultivation on 190
- Pu Mu author's survey observations on 191
- Nang Wang from Pu Sun, 180
- Pang, rhinoceroses in forests on, and difficulties of ascent, 192
- Sun hill coal foundation by Dr. Massie, 177
- — Lai Leng, fine peaches, flowers on, 191 utilized for survey work 189
- Sang Nang hill, from Pu Sun, 190
- Sao, utilized for survey, 181 game on, 181 2, elevation of and view from, 182
- Suang hill, death of Mouhot at and Lao superstation connected with 67
- Sun hill geological formation of and use of for survey work, 180
- — Noi hill suited for a sanatorium, 180
- Thai Song, forest country near and salt-plains, 82
- Pu Yo Pao of the Haw, meeting of, with Pua Picha, 100
- Puan, or Muang Puan, or Chieng Kwang, (*qv*) district, beauties of 179 infested by the Haw, 44 name of the Ka tribes of the high lands of, 157
- plateau luxuriant cultivation of 180
- Puoi, distance of from Sme, 113
- Pukbut Peak, important pass leading to, 100
- Pumpkin birth of the ancestors of the Ka and Lao races ()
- Punelaid and Co. English railway contractors to the railway survey in the Lao states 111
- RATIS for ferrying elephants, 30.
- Raheng or Muang Lak on the Me Ping 7, importance of tributaries trade and traders of 119 limit of navigation on the Me Nam in rainy season, 118 position of fixed, 1, 2 river near, 2, width of the minor branch of the Me Nam at, 78.
- and Chiang Mai, disputed boundary between, difficulties involved by to author, 5
- Railway survey of the Lower Lao States, author's connection with, 111 *et seq*
- Rainfall shortage in suggested causes 117
- Raman division of Patani, 10, survey work in 11 disputed territory in 8, 17
- Rajarat, and his procession of elephants at Yulon 18
- Ranga or Logo (*qv*), 9.
- Red Karen country drums of, 121
- Rhinoceros 171, horns as tribute, 60, used in medicine 62
- Rholondions 182, 191
- Rice, *passim*, 'golden' rice 190, 191 rice, 6, "Prince's" rice, 112
- husking of the Lantens 161.
- Richelieu, Louis du Plessis de, of the survey 196 198
- Road-making at Lampun, 113, 118
- Robber settlements on the northern frontier of Siam, 136
- Ross musson, Lt., in charge of the escort to the Siam survey, 78, 101, illness of, 91 route followed by to Luang Prabang, 81, 81 at the siege of the Haw stronghold, 86 enacts the surgeon there 89
- Rupees, the current coin of North-Eastern Siam 55, extensive circulation of, 188 uses made of at Luang Prabang, 61-1
- Sai Sam Tai, territory of China Siam and Atan under the jurisdiction of Chao Lai, 102
- Sai (*see* Kodah) 138
- Saigon, 177.
- Sajanalai, King of and his daughter, effect of his visit to China, 75
- Sakai, a negrito tribe of the August mountain, 18, appearance and habits of 11
- Salt manufacture, collection, trade and sources of, Baw Luing and Baw Ho, 162, Koiit, 27-8, La Tai, 161, Muang Lo 166 Muang Sing, 161, Nam Nan, 80, 81, Nam Nga, 170, Nam Taiung, 161, Nivung Kai, 93, Pu Piai Seng, 32, 1 Luang, 32, U Tai, 163 4
- Saltpetre collection of, 12
- Salwin river adventures from, 196 7, haunts of dacoits of, 111
- Sin Pin stream Burmese army slaughtered in 80.

- Sieling 113
 Siamese, M., of the Siamese survey 146,
 153, 151-155, 157, 161, 165, 169, 171,
 178-180-191 death of and author's
 tribute to 191
 Sma, 113 lig t of Ohleng Rung chief to
 district near 163.
 Sob Et author sent to 108. How ma
 rauders near, 90-1, 95, 98
 ——— Po, on the Nam Et river, 97
 Somd, 10 ig i and jungly country near, 10,
 settlers at foot of mountain beyond,
 afflicted with gonorrhea, to irrigate and
 other cultivation of and manufactures,
 11
 South wind said to be carried by angels,
 19
 Silk and trade in and prices 13, 61, 62,
 113-119
 Silver, 11
 ——— pheasants 181
 ——— smiths' work of the Yao, 158.
 Sing boundary, pass over, 160
 ——— lofty mountains west of, and Aka
 tribes of, 160.
 ——— wide plain of, rivers and settlers in,
 159
 Singapore, population of, 8
 Singora, or Sungkla holiday amusements
 at, and houses and representations the
 taking of 9
 Si l i houses attached to villages 10, 112
 ——— Icop o (I i Pawb) of the Ohleng Dao
 borders 12
 ——— (see also Dev l), possession 157.
 Spirits, belief in, 83-102, 103, 108, 111, 137,
 117, 118, 157, 169, 185
 ——— in charge of the records of Ohleng
 Mai, 121.
 ——— kept happy by sounding gongs, 16
 ——— mode of frightening away, 70-1
 Stevenson, M., of Rahong, kindness of to
 author, 7
 Stone jars at foot of How Chai hill, 187
 other remarkable groups of, 188
 Stones, curious on How Chai, 187-8
 Straits Settlements, secret societies in legal
 in, 3
 Striking a light, native method, 181
 Sungai trade of Koral 27.
 Sukotai, the King of and his serpent wife
 71-5
 Sungai Ruo river, affluent of the Perak
 river 17.
 Sungkla, see Singora
 Surveys planned by the Siamese Govern-
 ment 17
 Swallows' nests, edible, 181-5
 LA MUANG CHAM, head man of Muang
 Ngan, on the How incursions, 53
 ——— ——— Nang, author's meeting with
 Chao Bun Luang at, 159.
 ——— Sap revenue station for Yala, caves
 near, 11, stations, 12
 Talit village, the Nam Kawng at,
 171
 Tom after a How incursion, 85.
 Tachang camp at, 30.
 ——— Bangkok canal, conveyed on, 7
 Tai, or Shan, the, of the Salween, various
 names of, 129
 Tak, see Muang Tak or Rahong
 Tal 111
 Talking trees, legend of 66
 Taluang, salt of district, 82
 Tamun, passage down peacock attacked
 by hawk seen during, 83
 ——— Luang Prabang route followed by
 Collins and Ross Russell, 81
 Tat Chawn Si hill Luang Prabang,
 pagoda on 173 observations for posi-
 tion taken, 174
 Taungsu traders of Burmah slave traffic
 of, 55.
 Tavoy-Bangkok telegraph line, 2.
 Ten of I Bang and I Wu, called Mieng
 62, 121, 164
 ——— wild, 111
 Teak forests, felling and trade, Burmese
 mode of working, 5, worked by Karens,
 7 forests near Ohleng Kawng 11
 trade on to Mo Nam 118-19 on the Mo
 Ping, 120-128, 147 forests in the Mo
 Same valley, 5 floods of, on the Mo
 Nam 91, at Rahong 2 felling trade
 in the hands of the Ka Cho, 32
 Telegraph line (see Tavoy etc) route for,
 surveyed between Bangkok and Maul-
 mein, 1.
 Tel ben river gold mine in valley of,
 16.
 Long the Dasunt of Ptolemy, legendary
 trees of 69

Woodthorpe, General R. G., supplying
articles with the Indian survey value of
Pahom Pile, 132.

YALA division of Patani, customs station
for, 11

Yai du, in the Mo Nan, 73

Yao colonists on route for Cader Kawng,
153, (those in Nipin vince 80 settled
on Deng Wing mountain, 12) the men
of, wearing buttons with the Queen's
head on them, 153 origin and divisions
of the tribes of, 150 1; skill in metal

work and embroidery, 150 158; villages
of, on the slopes of Dao Wa, 157, *see*
route to Pant, 168 9.

Yaring division, Samese states in Malay
Peninsula, 9

Yaiom and its surroundings 13 Si Hingh
Low it, 11 15

Yunan or Liksa Kula, and its founder,
70, distance of, from Sing, 161,
Governor of, the signal head of the
Haw manders, 11, and the tribute of
Luang Prabang, 60 trade of with North
East Siam, 160

Yusuf, Haw travelling trader, 112

THE END.

